Government of Saskatchewan

Annual Report 1988-89

Saskatchewan Highways and Transportation

90-03471/

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Letter of Transmittal

SASKATCHEWAN

Legislative Building
Regina, Saskatchewan S4S 0B3
(306) 787-6447

Minister of
Highways and
Transportation

Her Honour The Honourable Sylvia O. Fedoruk, O.C., S.O.M.
Lieutenant Governor of Saskatchewan

Your Honour:

It is my pleasure to submit to you the 1988-89 Annual Report for Saskatchewan Highways and Transportation.

I'm pleased to report Saskatchewan Highways and Transportation has continued to advance in its committment to a safe and efficient transportation system for the people of Saskatchewan.

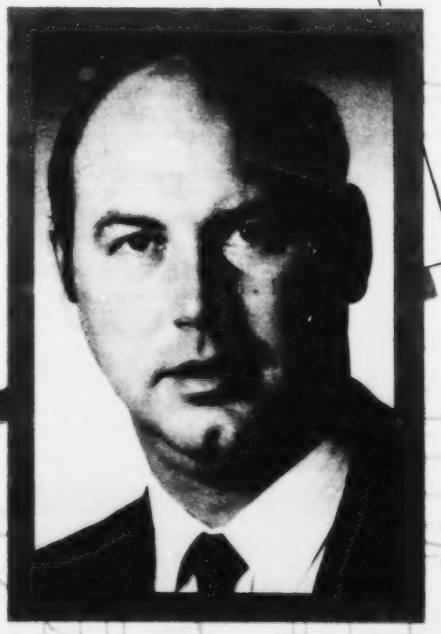
The reliable movement of people and goods plays an important role in our economic, cultural and social future. To that end Saskatchewan Highways and Transportation is developing innovative programs and policies.

This year our connection to the rest of our nation was strengthened through continued maintenance and improvement of an integrated multi-modal transportation system.

The dedicated effort of our employees is ensuring we will have a quality transportation system in our province's future.

Yours sincerely,

Sherwin Petersen
Minister



Saskatchewan

Saskatchewan
Highways and
Transportation

Deputy Minister

1855 Victoria Avenue
Regina, Canada
S4P 3V5

April 1, 1989

The Honourable Sherwin Petersen
Minister of Saskatchewan Highways
and Transportation

Sir:

It is my pleasure to present to you the Annual Report of Saskatchewan Highways and Transportation for the fiscal year ending March 31, 1989. This report contains a detailed review of all activities within the department.

The transportation sector in Saskatchewan and across Canada is indeed a changing environment. Department staff are actively engaged in addressing that change. In late 1988, the Phase 1 report of the National Highways Policy study, in which the Department of Highways and Transportation was an active committee member was made public. The Phase 2 report detailing costs and benefits will be made public early in 1990. The study, slated for completion in 1991 has seen the federal government recognize its role in the development of a national highway system.

The department is involved in a broad range of research initiatives, including the Stategic Highway Research Program (SHRP) and its Canadian equivalent (C-SHRP). Saskatchewan's involvement relates to long term research studies of pavement and bridge performance.

Another major research initiative this year is the road/railer demonstration project. The purpose of this project is to assess the feasibility of this concept as an alternative to the abandonment of railway branch lines.

A national accord on commercial vehicle weights and dimensions was signed in 1988. In August, 1988 Saskatchewan was the first province to have new weight and dimension regulations passed as part of a national agreement to improve uniformity of weights and dimensions across Canada. The results of this new initiative will be increased highway safety and lower transportation costs.

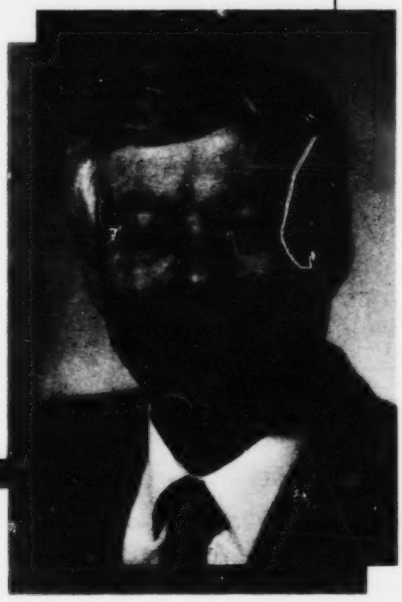
There is continuing emphasis in the development and enhancement of management information systems. This is resulting in more effective use of new computer technology by department staff. Prime examples are the implementation of a pavement management information system and a pilot project using a geographical information system.

Two sets of passing lanes were open to traffic on the TransCanada Highway east of Indian Head. Thse auxiliary lanes improve traffic flow on busy two lane highways. Further operational studies are planned before more passing lanes are constructed. Two construction highlights were the opening of a new interchange at the Junction of Highway's No. 2, 3 and 55 north of Prince Albert and the completion of No. 41 Highway connecting Melfort to Saskatoon.

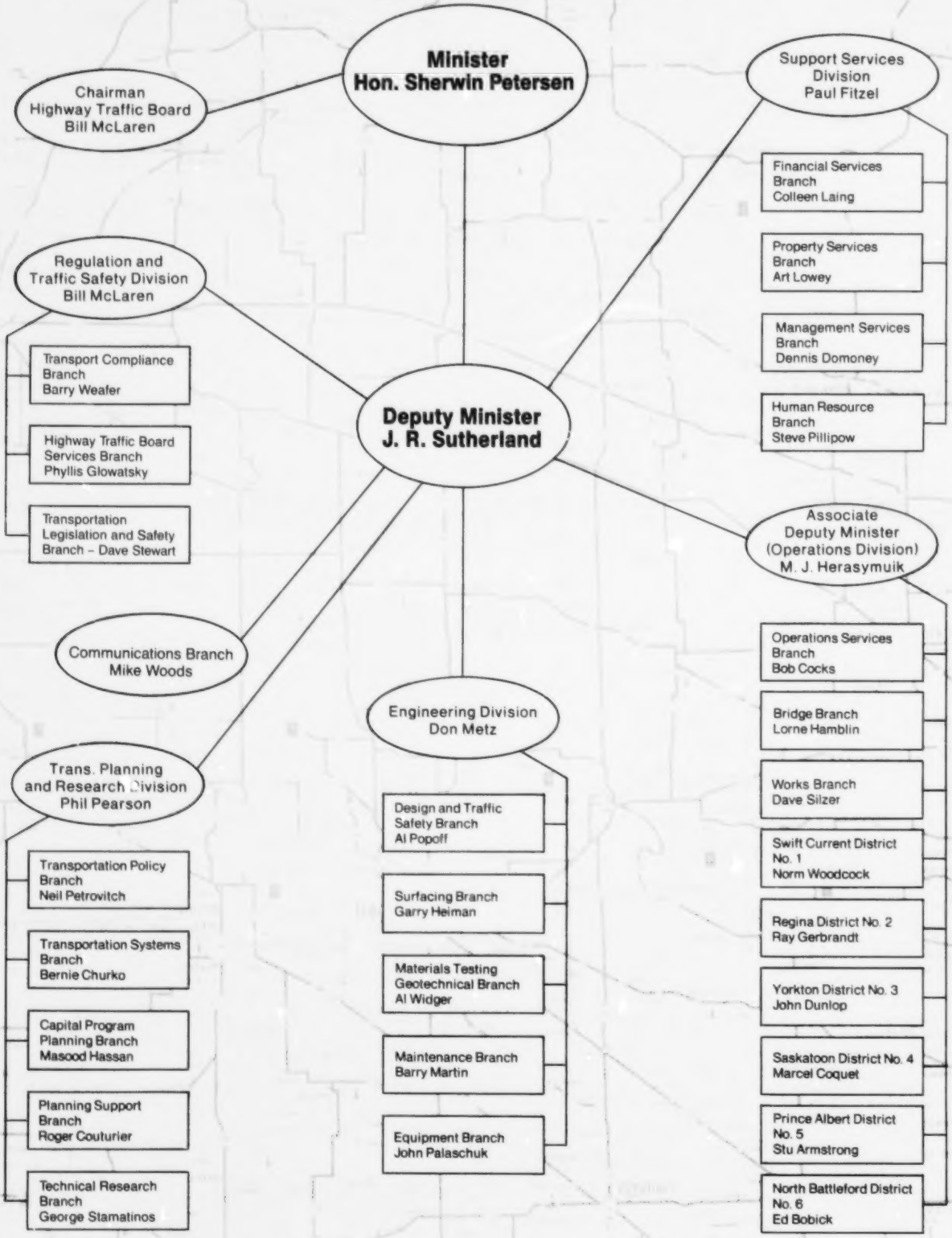
In December 1988 the Regulation and Traffic Safety Division was relocated from the SGI Building to the department's head office at London Life Place. This move will be beneficial not only to the Regulation and Traffic Safety Division but to the entire department.

I wish to commend all department staff for their dedicated efforts in providing safe, efficient transportation services to the travelling public.

J.R. Sutherland
Deputy Minister



Organization Chart as of March 31, 1989



Major Objectives

- To provide, maintain and protect provincial highways, roads, airports and related facilities at an acceptable level of service to users.
- To develop policies and programs for the purpose of improving transportation systems for the movement of people and goods.
- To provide transportation systems and services that contribute to the economic, social, cultural and environmental well-being of the province.
- To achieve excellence in the management of human, technological, financial and information resources of the Department.
- To improve transportation safety for the purpose of reducing the incidence and severity of accidents.
- To provide assistance to local governments for the improvement of community airports and highway routes through urban areas.

Mission

To plan, implement and manage an integrated multi-modal transportation system which provides for the safe, efficient movement of people and goods at a level of service acceptable to the public for the economic and social development of the province, within the mandate and resources provided by the Government of Saskatchewan.

An integrated transportation system.

Communications Branch

Mike Woods
Director

The mission of the Communications Branch is to communicate programs, policies and accomplishments consistent with the department's mission. This communication will result in an informed public who are aware of, and familiar with, the purpose and services provided by Highways and Transportation.

Branch staff achieve this mission by setting and adhering to four primary objectives:

- effectively communicating interbranch activities, department policies, and changing trends in the transportation industry to department employees, special interest groups, and the general public
- gathering and assessing information to assist in the development of programs and projects to be communicated to the public
- establishing approval systems, production procedures and selecting appropriate distribution systems as they apply to communication materials for the public
- adhering to a professional code of ethics as set out by recognized communications/public relations associations.

In addition to these primary objectives, the Communications Branch provides two mandatory responsibilities:

- the branch co-ordinates the production and distribution of official and statutory publications
- the branch provides a central information service for public inquiries.

Highlights

During the fiscal year the Communications Branch planned and implemented an All Terrain Vehicle safety campaign, continued the 'Orange Zone' highway worker safety, Winter Hotline, Road Restriction, and Salvage of Hay advertising programs. Plus co-ordinated special events and produced a wide range of print and audio-visual materials.

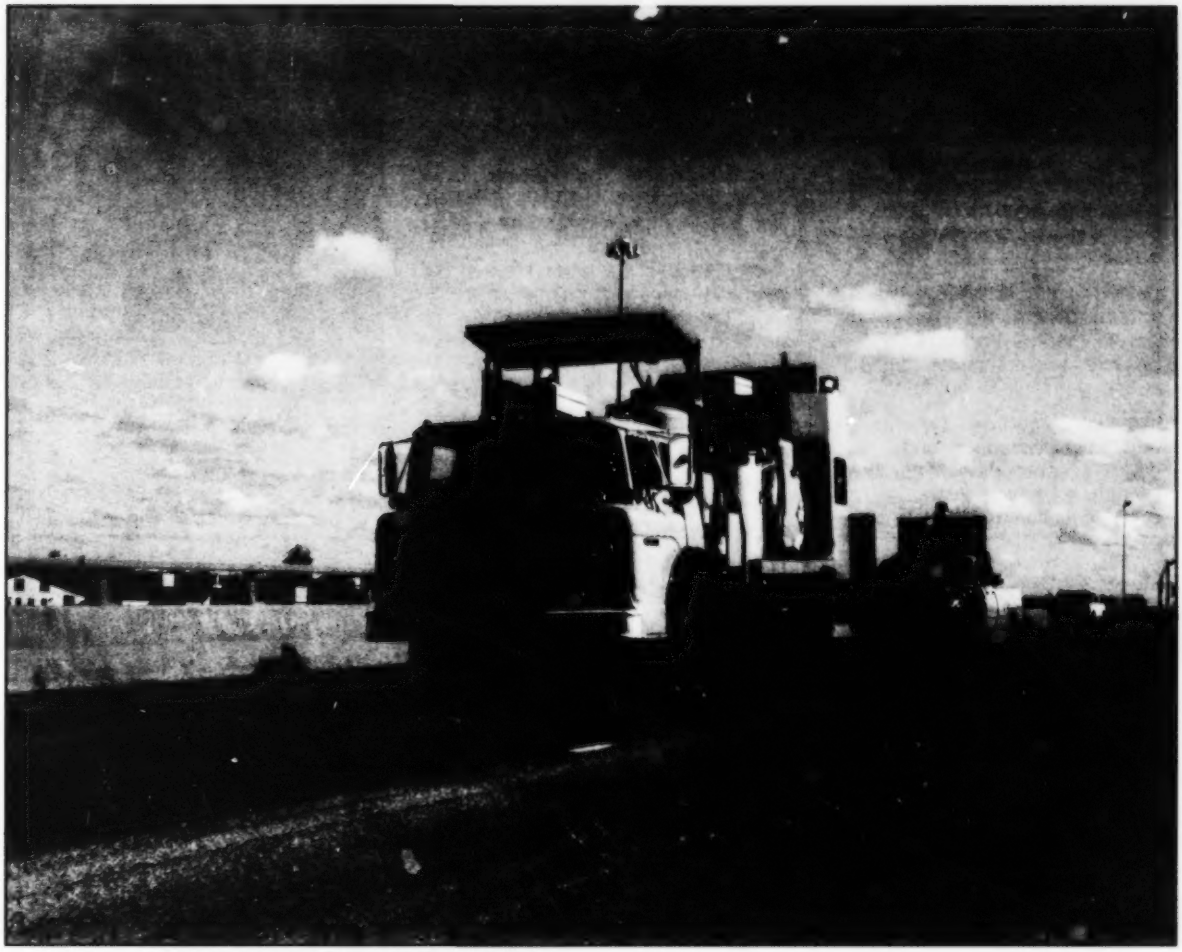
The ATV awareness program was initiated as the result of new legislation. This program was a multi-media campaign utilizing television, radio and print thoughout the province and was supported with a widely distributed poster and brochure.

A special opening was held upon the completion of Highway 41 running between Saskatoon and Melfort. In addition an opening was held to unveil the new interchange at the Junction of Highways 2, 3 and 55 at Prince Albert.

The branch also participated in several special events and annual conventions including National Transportation Week, RTAC, SUMA and SARM annual conferences.

During the year the branch issued 92 media releases and maintained a news clipping service for the department.

Printing activities of the branch included the co-ordination of the 1989 Official Highway Map, department 1987/88 annual report, Traffic Accident Systems (TAIS) report, brochure and poster, and the department staff publication In Motion.



Paint Striper working on Highway No. 1 East near Regina

Operations Division

The mission of the Operations Division is to implement and administer operational programs and manage the designated provincial transportation facilities for the department within the specified levels of service and resources. The Operations Division responsibilities are carried out through six districts and three head office branches.

During the last year, 227 kms of grading and 719 kms of surfacing were completed. The number of contracts tendered and amounts paid out to contractors were at an all time high. In keeping with the department's long term strategy of emphasis on pavement rehabilitation the tonnes of asphalt placed on the highway system has continued to increase. Unit bid prices are essentially remaining steady. The major construction highlight was the completion and official opening of No. 41 Highway for its entire length from Melfort to Wakaw.

The level of service and riding quality on the highway system has been maintained. The excellent weather conditions have aided in the performance of our light pavements. The use of the "Sandvik Blade" is showing a great deal of potential in restoring cross section and profile on the oil treated highway system. Private sector mowing of the highway right-of-way continues to be cost effective.

In accordance with the department's long term technology plan, installation of local area networks at our district headquarters commenced during the year. This will provide for more effective management information systems and improved program delivery.

Details of specific programs and accomplishments are provided in the following individual branch and district reports.

M. J. Herasymuik
Assistant Deputy Minister
(Operations)

Sherwin Petersen
Minister
Highways and Transportation

J. R. Sutherland
Deputy Minister

M. J. Herasymuik
Assistant Deputy Minister

Bob Cocks
Operations Services Branch

Lorne Hamblin
Bridge Branch

Dave Silzer
Works Branch

Norm Woodcock
Swift Current
District No. 1

Ray Gerbrandt
Regina
District No. 2

John Dunlop
Yorkton
District No. 3

Marcel Coquet
Saskatoon
District No. 4

Stu Armstrong
Prince Albert
District No. 5

Ed Bobick
North Battleford
District No. 6

Operations Services Branch

Operations Services Branch provides executive, technical and financial services to the Operations Division.

Major Activities

Management of centralized activities related to tendering, scheduling and contract administration.

Development and control of the department's annual capital and maintenance programs and budgets.

Administration of purchasing construction and maintenance materials.

Coordination of cost-shared programs.

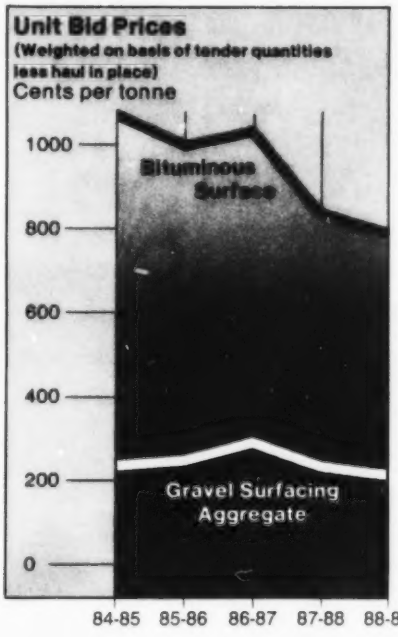
Tenders

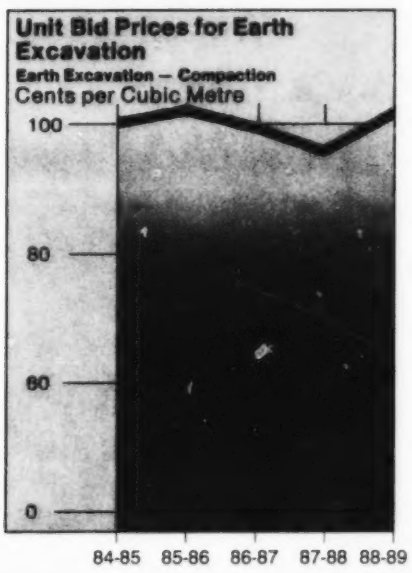
One hundred and twenty-nine construction tenders valued at $58.2 million were awarded during 1988-89. In comparison with the previous year, 14 more tenders were issued with a $12.2 million increase in the value of contracts awarded.

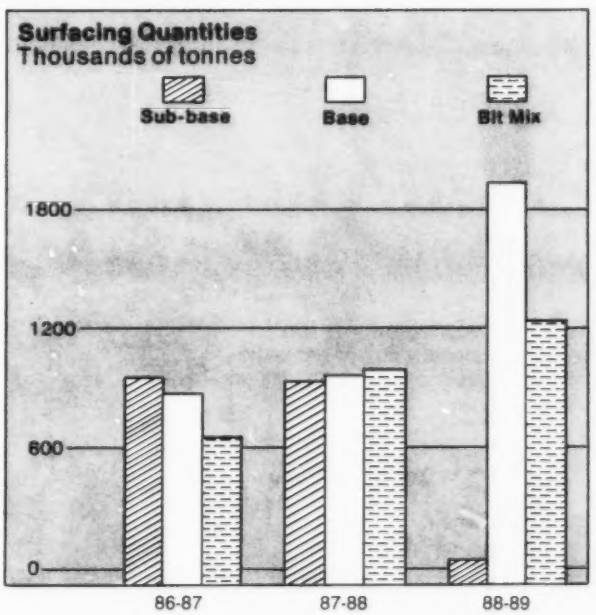
In addition, 30 maintenance mowing tenders valued at $290,000 were awarded. In comparison with the previous year, 22 more mowing tenders valued at $185,000 were issued.

Contracts are tendered throughout the year to provide balanced workloads for contractors. In the fall and winter, heavy emphasis is placed on processing aggregates so that much of the hauling can be done during frozen conditions to minimize damage to haul routes and to create winter work.

Unit bid prices for bituminous surface decreased, gravel surfacing aggregate and base course remained steady and earthwork increased compared to the previous year.







Grading

The amount of earth excavation work completed during the year was 5 933 907 m^3.

There were 227 km of new construction completed with 41 km of grading work underway at year end.

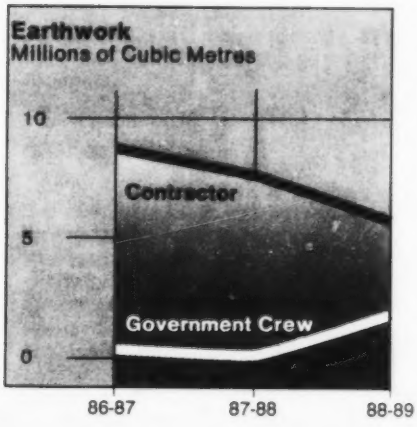
Surfacing

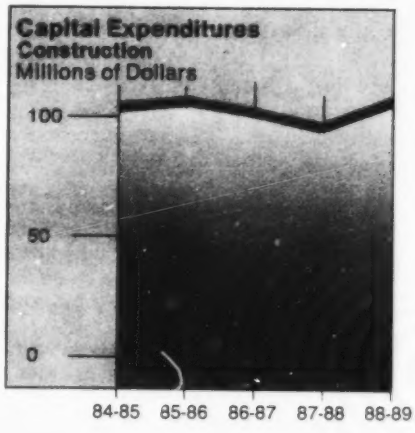
The quantity of bituminous mix placed in 1988-89 increased to 1 237 900 tonnes from 971 200 tonnes. The quantity of sub-base and base material placed in 1988-89 increased to 2 583 700 tonnes from 1 888 100 tonnes in 1987-88.

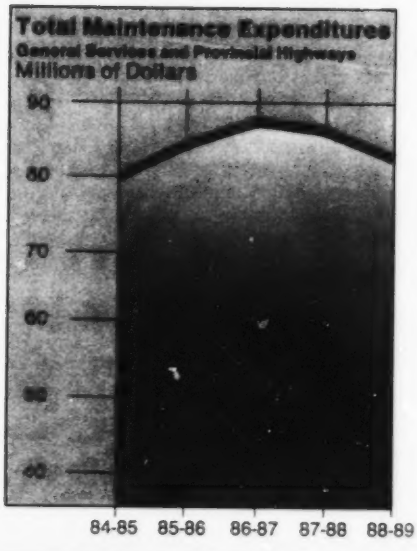
During the year 18 km of oiling, 26 km of pavement C, 134 km of new pavement and 541 km of pavement rehabilitation were completed.

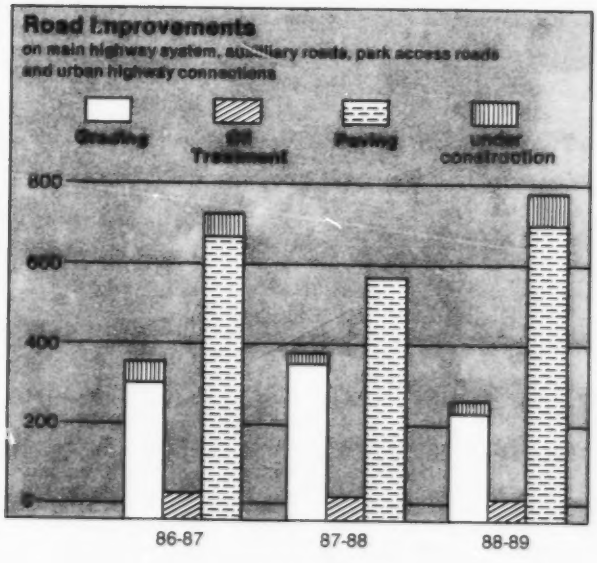
Urban Surface Transportation

Under the Urban Assistance Program $6,220,243 was provided to assist 22 communities to improve provincial highway routes.









Air Transportation

Thirty-three local governments participated in the Airport Assistance Program administered by the branch. The department provided $143,090 in assistance under the program. $102,706 in capital costs was spent at three provincial airports.

Rural Transportation Assistance Program

Operations Services Branch administered a program to provide transportation services to communities in rural areas not presently served by other public transportation.

The provincial government, through Saskatchewan Highways and Transportation, underwrites the net operating cost of nine routes which totalled $234,773 in 1988-89.

A Rural Bus Subsidy Program was initiated in 1988-89 which ensures that regular scheduled bus service will continue for communities previously served by private bus operators. In 1988-89 a total of four routes served by private carriers came under the program at a total cost of $47,772.

In addition to the above routes, Operations Services also administered the bus lines into Sandy Bay and Deschambault in northern Saskatchewan. During the year $74,522 was spent on these two northern feeder service lines.

Other Highlights

Automatic railway crossing signals were installed at four locations during the year at a cost of $20,262.

The department provided lighting at 61 highway intersections at a cost of $261,565.

121,229 calls were handled on the department's Hotline Winter Road Information Service.

342 purchase orders for construction and maintenance materials valued at $33,272,340 were processed.

772 payments to contractors were processed totalling $62,248,253.

Bridge Branch

The Bridge Branch mission is to design, construct, maintain and manage the bridge component of the department's road transportation system, and to provide a source of structural and bridge related expertise for other department and government units, to established levels of service and within available resources.

Design

Design was completed for seven bridge projects involving 700 m^2 of roadway area, and for nine traffic barrier retrofits totalling 500 m.

Using a recently developed bridge evaluation model, assessments were undertaken for eight existing bridges to determine the effect of the new vehicle weight regulations, and designs were subsequently prepared for the strengthening of three structures.

Construction

Construction work was completed on the new interchange structure located on the north side of Prince Albert. A new railway subway was built on Highway No. 16 between Borden and Langham, and work began on a new railway subway over Highway No. 16 at Lloydminster.

Three other new bridges were constructed using standard modular components of precast concrete, and major structural upgrading was undertaken on another five projects.

A major betterment was completed on a 220 m bridge located on Highway No. 3 over the North Saskatchewan River near Deer Creek. The work included restoration of the reinforced concrete deck surface, installation of a waterproofing membrane and the repaving of the deck with an asphaltic concrete wearing surface.

Maintenance

Bridge deck restoration projects were undertaken on two grade separation structures located near Balgonie, and four bridges located near Lumsden. All the projects involved the repair of the deck and its protection with a waterproofing membrane and pavement.

Minor repairs were completed on another 127 bridges located throughout the highway system. Four bridges were replaced with culverts.

Other Highlights

Programmed inspections were done on 220 bridges, and the concrete decks of 41 other bridges were monitored for the corrosion of the reinforcing steel.

The branch assisted in the evaluation of 13 permit requests associated with the bulk commodity haul policy, and reviewed 800 referrals for single trip overweight vehicle permits.

Assistance was provided to other department units for seven structural-related projects.

Summary of Bridge Work Done During 1988-89 on Provincial Highways

Highway Control Section	Location	Description of Work
3-1	Over Armit River near Armit.	Upgrading of a 36 m wood pile bridge.
3-1	Over Kinakin Creek near Armit.	Upgrading of an 18 m wood pile bridge.
3-1	Over stream near Armit.	Construct 15 m bridge with precast concrete deck.
3-10	Over Little Red River near Prince Albert.	Upgrading of a 42 m wood pile bridge.
3-11	Over Highway No. 2 at Prince Albert.	Complete two-span multi-lane overpass.
3-17	Over North Saskatchewan River near Deer Creek.	Major deck repairs to 220 m four span steel girder bridge.
6-7	Over Qu'Appelle River near Southey.	Upgrading of 54 m bridge with precast concrete deck.
10-6	Over Highway No. 1 at Balgonie.	Major repairs to a three span overpass.
10-6	Over C.P. Railway at Balgonie.	Major repairs to a three span overpass.
11-1	Over Qu'Appelle River at Lumsden.	Major repairs to two concrete bridge decks.
11-1	Over Highway No. 20 at Lumsden.	Major repairs to two concrete bridge decks.
16-24	Over Highway No. 16 near Borden.	Construct railway subway.
16-30	Over Highway No. 16 at Lloydminster.	Start construction of railway subway.
44-3	On Gardiner Dam.	Upgrade traffic barrier.
303-01	Over Englishman River near Turtleford.	Construct 12 m bridge with precast concrete deck.
304-01	Over stream near Makwa.	Upgrading of a 6 m wood pile bridge.
304-01	Over Horsehead Creek near Makwa.	Construct 24 m bridge with precast concrete deck.

Works Branch

Works Branch functions in four main areas: grading, surfacing, bridges and winter road construction. The branch provides these and other specialized construction services for the Department of Highways and Transportation and other government departments and agencies.

The branch employs between 75 and 100 people during the construction season. These include equipment operators, truck drivers, plant operators, cooks, administrative personnel and supervisors. The nature of work usually requires people to be away from home for long periods of time, working out of mobile self-contained camps.

Grading

One grading crew moved 168 807 m^3 of earth material with the use of private and government equipment. Work was carried out on Highway No. 265 at Beauval in the vicinity of Candle Lake, and Highway No. 106 in Big Sandy Lake area. The crew prepared and placed cold mix on 17.9 km in the Anglin Lake area.

Surfacing

Two surfacing crews completed various road and custom work projects throughout the province. Projects included 29 km of drying subgrade and shoulders on various highways. The crew hauled and placed 9 394 m^3 sand on Highway No. 30 in the Eston area. There were 9,698 depressions filled on various highway surfaces which required 875 tonnes of sand, sulphur and asphalt mix.

Bridge

The five bridge crews constructed 26 new bridges and repaired 135 bridges for the Department of Highways and Transportation, Rural Development, and Sask Water Corporation. A total of seven bridges had 4 647 m^2 of major deck repairs, cathodic protection and waterproofing completed.

Winter Roads

43 km of winter road was constructed on Wollaston Lake from Hidden Bay on Highway No. 905 to Wollaston Post.

Training

Works Branch completed 104 man days of training in management, equipment repair and safety.

Saskatchewan
Highways and Transportation

District Offices:

- Swift Current District
- Regina District
- Yorkton District
- Saskatoon District
- Prince Albert District
- North Battleford District

Swift Current District

The Swift Current District encompasses an area in the southwest quadrant of Saskatchewan whose boundaries are the U.S. border, the Alberta border and a line adjoining Macklin, Biggar, Mortlach, Gravelbourg and the Port of West Poplar River. Department personnel are responsible for the maintenance, construction and design activities on all of the 4 235 kilometres of roadway within the district.

Administration

The administration section handles the personnel functions for the district including processing pay sheets, training requests, hiring and personnel policy interpretation for the approximately 225 permanent and seasonal employees in the district.

District staff took 715 man days of training this past year encompassing the mechanical, technical, safety, computer and management areas.

Administration staff also handles the word processing and other computer related applications for the district.

Design and Material Testing

The design section completed 12 kilometres of preliminary survey and subgrade design. In addition to this, design of various spot improvements, illumination, safety improvements and miscellaneous projects were carried out. A detailed location study was completed for Highway No. 21 from the U.S. border to Highway Junction No. 13.

Engineering assessment of over 200 requests for roadside development, subdivisions, utility crossings as well as drainage complaints were conducted.

The district material testing laboratory is administered under the design function in the district. Over 3,000 gravel pit exploration samples and 2,300 quality control samples for various surfacing, grading and crushing contracts were processed.

The gravel location crew confirmed the existence of 423 000 m^3 of gravel and 75 000 m^3 of sand by testing one new and 14 existing sources. Additionally, 35 gravel pits were re-surveyed in order to update the pit plans.

Construction

The construction engineering section supervises the capital construction program, cost-shared programs, miscellaneous safety improvement and construction programs and materials production for maintenance.

Included in the 14.8 kilometres of subgrade construction and 153.64 kilometres of surfacing and re-surfacing construction completed in the year are the following major projects:

- Surfacing of the new set of lanes on Highway No. 1 from west of Webb to west of Gull Lake
- Re-surfacing of Highway No. 15, from Milden to Sovereign
- Re-surfacing of Highway No. 7, from Rosetown east
- Re-surfacing of Highway No. 1 near Parkbeg and from Herbert to Rush Lake
- Re-surfacing of Highway No. 4, north of Rosetown and south of Elrose
- Re-surfacing of Highway No. 44, from Plato to Eston and west of Eston
- Grading and seal coat on Highway No. 342, from Lacadena to Tyner (13.80 km)

The construction section administers the cost shared programs. In 1988-89, urban assistance to the City of Swift Current totalled $180,000 for lighting along Highway No. 1, a traffic study and completion of work on the North Frontage Road. Under Airport Assistance, 12 communities received operation and maintenance assistance and one community received development assistance. The expenditure for Airport Assistance in 1988-89 was $38,184. Work totalling $171,000 was supervised in provincial parks under the Recreation Facilities Improvement Program. This included work in Cypress Hills, Saskatchewan Landing and Douglas Provincial Parks.

The district construction section also supervised the production of materials for district maintenance usage. During 1988-89, 56 100 tonnes of cold mix material was produced and 251 000 tonnes of material was crushed for maintenance use. The section also supervised capital and maintenance seal coats on 410 km of provincial highway.

Maintenance

The maintenance section operates 25 section crews and three sign crews located in 21 communities throughout the district.

The section crews supplemented by private sector forces used 266 300 tonnes of processed aggregate, 79 700 tonnes of bituminous cold mix and 17 628 000 litres of liquid asphalt in accomplishing the following:

293 700 m^2 of deep patching

5 443 300 m^2 of spot sealing

365 km of seal coating

825 300 m^2 of cold mix recycle

Summer maintenance activities began in early April and continued into early November. Due to very dry conditions, summer and winter activities were at very low levels resulting in significant savings in district maintenance expenditures.

The maintained roadway in the district consists of:

154 kilometres of gravel surface

2 425 kilometres of oil treated surface

1 468 kilometres of paved surface — two lane

188 kilometres of paved surface — four lane

62 kilometres of tourist facility roadway

The district is also responsible for maintenance of eight picnic sites located adjacent to provincial highways.

To maintain a fleet of approximately 200 pieces of equipment, the maintenance section operates heavy duty equipment repair depots at Swift Current and Rosetown.

Regina District

The Regina District is responsible for 5 332 kilometres of provincial and public highways and tourist facility roads, located in the southeast corner of the province.

Design

The design section carried out 28 kilometres of field survey and completed 20 kilometres of subgrade design primarily on Highway 11 between Girvin and Aylesbury and Highway 48 near Windthorst. Other designs included Highway 306 east of Highway 6 and Highway 8 north of Highway 18.

Incidental items included the assessment of 95 subdivision proposals along with other development assessments for protection of right-of-way. All fatal accidents were investigated where the highway could have been a contributing factor.

Construction

Thirty-four contracts were supervised by the construction section.

During the year 53 kilometres of subgrade construction were completed with 19 more in progress. 178 kilometres of surfacing was completed with 14 more in progress. The surfacing included some 140 kilometres of resurfacing as part of the department's rehabilitation program. Four seal coat contracts were supervised encompassing some 563 kilometres.

Major construction accomplishments included the reconstruction of a four-lane section on Highway 11 between Davidson and Girvin; the subgrade construction of Highway 361 west of Alida; completion of a further 13 kilometres of new subgrade on Highway 363; commencing the reconstruction of Highway 364 north of Balgonie and completion of the base-course construction on Highway 13 between Redvers and the Manitoba border. The construction of a new scale site east of Estevan on Highway 39 included the installation of electronic equipment to weigh trucks while they are moving. Passing lanes were constructed on Highway 1 west of Wolseley and west of Grenfell as the department experimented with the use of such lanes as an alternate to four-lane construction.

Some projects of note included park roadway construction and gravelling of a portion of the Christopher Trail in Moose Mountain Park and the construction of two storm retention ponds on Highway 35 at Fort Qu'Appelle as a means of controlling erosion.

Maintenance

Maintenance activities were carried out by 34 section crews in 32 communities and two special crews.

Normal road repairs including 6.75 million square metres of spot seal construction, 94 900 square metres of deep patching of pavements, and 96 500 square metres of flushing.

330 kilometres of oil treated surfaces were lifted and relayed, most using the "Sandvik" grader blades, bringing significant improvement in the riding quality of the oil treated surfaces throughout the district. 67 000 tonnes of bituminous mix were produced for patching. Materials used included 17.23 million litres of liquid asphalt, 83 300 tonnes of bituminous mix, 157 800 tonnes of crushed aggregate and 19 700 tonnes of screened aggregate. 13 600 tonnes of salt were used for snow and ice treatments.

Four contracts were tendered for seal coat on oil treated surfaces and pavements. Three contracts included the blading of 134 kilometres of gravel surfaces and nine contracts covered the mowing of some 6 400 hectares. 228 000 tonnes of repair aggregate was produced under contract.

Issuing of permits for private works on or near the right-of-way included 170 permits for utility crossings, 66 for approaches and structures and 50 for private signs. The Winter Hotline handled in excess of 50,000 calls between the months of November and March.

The repair depots in Moose Jaw and Weyburn provided service for 490 power units and various sundry equipment.

Materials

Materials engineering staff completed or supervised the preparation of 14 surfacing and rehabilitation designs covering 206 kilometres. One preliminary geotechnical report was prepared for subgrade construction.

The gravel location group tested new aggregate sources containing approximately 898 000 cubic metres of material. One new source containing approximately 298 000 cubic metres was secured in the Storthoaks area. Thirty pits were retested, surveyed and plans were updated.

Approximately 492 000 cubic metres of sand and gravel was used in maintenance and construction. Public agencies and individuals used a further 167 000 cubic metres comprising 68 permits.

Testing of existing road grades and the borrow pits was carried out on 122 kilometres of highway proposed for reconstruction.

Shareable Programs

Shareable works were carried out in Regina, Moose Jaw, Weyburn and Estevan, the four cities in the district. Major works in Regina included completion of the Albert St. Bridge restoration and the Pasqua St and Ring Road intersection, various overlays and the instigation of a comprehensive Transportation Study. Continuing work included Moose Jaw's 4th Ave. Viaduct and Estevan's Kensington Ave. Weyburn received funding for an overlay on 1st Ave.

The construction of a sidewalk in Keeler was also shared.

Airport operating and maintenance grants were provided to Assiniboia, Carlyle, Estevan, Moosomin and Weyburn.

Other Activities

Safety improvements included installing guardrails on four bridges, installing flashing lights at three intersections with a channelized intersection developed at Broadview. Escape ramps were built at various T intersections.

Miscellaneous projects included the repair of slumping slopes on the Belle Plaine overpass, a loadometer site being built north of Kenosee and the resurfacing of a frontage road on Highway 1 near White City. Gravel was pushed up from two gravel pits taking advantage of the low water table prevalant at the time.

Recreation area improvements included the paving of roadways in the Upper Valley Campground at Fort Qu'Appelle and constructing various maintenance material stockpiles for the parks.

Landscaping included major plantings on Highway No. 1 at Indian Head and Wolseley and levelling and sloping three gravel pits.

16 delineation lights were installed at various intersections throughout the district.

Hotline Road Information

For added safety
Give us a call . . . anytime

Moose Jaw	694-3860	Saskatoon	933-8333
North Battleford	446-7785	Swift Current	778-8355
Prince Albert	953-3575	Weyburn	848-2432
Regina	787-7623	Yorkton	786-1666
Rosetown	882-2791		

Your Travelling Safety is Our Prime Concern

Saskatchewan Highways and Transportation

Sherwin Petersen
Minister

J. R. Sutherland
Deputy Minister

Yorkton District

The Yorkton District staff are responsible for 3 410 kilometres of public and provincial highways, including 65 kilometres of tourist facility access roads and the operation and maintenance of the Provincial Airport at Hudson Bay.

Administration

The administration section handles the personnel functions for the district including processing payroll, training requests, hiring and personnel policy interpretation for 69 permanent and approximately 151 seasonal employees.

District staff participated in approximately 432 person days of training during 1988-89 encompassing the mechanical, technical, safety and management areas.

Administration staff also handle word processing and other computer related applications as well as processing all accounts payable for the district.

Construction and Design

District construction section staff supervised a total of 17 major contracts during the year which included three crushing contracts, two mixing contracts, one seal coat contract and a sand sulphur contract. Thirty-three kilometres of subgrade were constructed and 108 kilometres were surfaced.

Some of the major projects completed during the year were:

— the resurfacing of Highway No. 35 from Wadena to 6 kilometres north; from the Junction with Highway No. 49 to Rose Valley and from the Junction with Highway No. 15 (Leross) to 12.5 kilometres north.

— the re-surfacing of Highway No. 5 and 9 in the vicinity of Canora.

— the surfacing of Highway No. 38 from the Perigord Access to Greenwater Provincial Park.

— the re-surfacing of Highway No. 16 from Langenburg to Churchbridge.

The major grading project completed on Highway No. 3 from the Manitoba border to west of Armit concludes the rebuilding of Highway No. 3 from the Manitoba border to Hudson Bay. Also, the major grading project completed on Highway No. 9 from north of Lady Lake to Usherville concludes the rebuilding of Highway 9 from Preeceville to Hudson Bay.

Numerous other safety and drainage improvements on the highway system were administered by construction and design staff.

Sandvik Blade — Research of Softening Agents

Maintenance

Oil treated surfaces generally continued to perform well and required only routine maintenance. Paved surfaces also performed well. The deep patch expenditures totalled $567,150, slightly less than the previous year.

The maintenance section produced 45,000 tonnes of bituminous mix and applied seal coat on 295 kilometres of highway surfaces. An average pavement performance rating of 5.8 was attained on our oil treated surfaces.

Use of the "Sandvik Blade" in the restoration of surface cross-section and profile on oil treated highways continues to show potential for considerable cost savings and/or improved service. More developmental work will be carried out in subsequent years, refining this particular activity and making it less weather dependent.

The highway system maintained includes:

— 494 km gravel surface
— 962 km oil treated surface
— 1 867 km paved surface
— 65 km roadway within campgrounds and Provincial Parks
— 16 picnic and campground sites
— 1 Provincial Airport

Materials

Materials section staff completed 105 km of grade sampling and testing, six kilometres of borrow pit testing and 16 kilometres of select borrow testing for subgrade and surfacing design purposes.

Gravel location crews identified 36 new sand and gravel deposits and re-tested 17 existing department-owned pits. The searches verified an additional 2 275 074 m^3 of granular material, of which 1 200 000 was located for eight local municipalities on a 50-50 cost share basis. Thirty-one pits were resurveyed and quantities and plans were updated.

Staff issued 23 permits to public institutions and private individuals who removed 30 093 m^3 of sand and gravel from department-owned pits this year. District construction and maintenance activities used an additional 566 500 m^3.

The District Testing Laboratory completed 14 asphalt designs and performed various tests on 3,488 material samples.

Yorkton district testing Sandvik blading

Saskatoon District

The Saskatoon District, which is the core of the province abutting all five remaining highway districts, is responsible for 2 537 km of the provincial highway system. Some of the activities carried out are listed below.

Highlights

- Completion of the grading of Highway No. 41 to Melfort and the opening of this highway to the travelling public.
- Surfacing and opening of 15 km of four laning on the Yellowhead Highway No. 16 from Saskatoon West.

Construction

The construction section supervised 15 major contracts and 10 minor contracts in 1988-89. A summary of work supervised is as follows:

- 19.8 km of subgrade construction
- 73.1 km of surfacing
- construction of one loadometer site, two intersection treatments, surfaced one frontage road and improved several kilometres of sideslopes through miscellaneous special construction and special safety improvement programs
- 218 km of seal coating
- 18 bituminous mix stockpiles
- 2 aggregate crushing contracts
- 1 deep patching contract
- 1 rubber asphalt crack filling contract

Maintenance

The maintenance section accomplished the following improvements in the 1988-89 season.

- deep patching 8 060 m²
- thermo patching 20 km
- purchased liquid asphalt 4 865 286 L
- seal coat on paved highways 41.7 km
- seal coat on oil treatment 205 km
- stockpiling bituminous mix 42 454 t
- seeding right-of-way 100 ha
- purchased hot-mix 2 015 t
- flushing 13 km
- sand seal on subgrade 28 km
- calcium chloride dust control 244 000 L
- rubber crack sealing 21 km
- mowing by contract 943 ha
- contract right-of-way ditch cleaning 345 km
- machine patching 35 000 t
- spring cleanup around Saskatoon 25 km

Winter Maintenance Usage

- screened aggregate for ice control 6 000 t
- calcium treated sand for ice control 3 000 t
- salt purchased 7 969 t
- purchased calcium chloride flake 40 t
- new salt bins were constructed at Radisson, Kenaston, Humboldt
- maintenance expenditures were $8,011,263 of which $1,580,459 was for winter maintenance and $2,051,007 was for special maintenance projects.

The Saskatoon Road Information Service (Hotline) handled 30,026 telephone calls throughout the winter.

Design

Design section carried out 45 km of field survey and 49 km of subgrade design. Additional projects designed were:

- hydraulic designs for bridge replacement
- delineation lighting at intersections
- entrance and exit ramps at Saskatchewan Place
- intersection treatments
- numerous signing plans
- loadometer sites
- observation site at McCloy Creek.
- Interchange Design at Hwy. No. 11 and Marquis Drive

Numerous permit requests for subdivisions and utility crossings were reviewed.

Materials

Materials section completed or supervised 15 rehabilitation designs involving nine consultant commissions, five surfacing designs and six geotechnical assessments for both Saskatoon and Swift Current districts.

Analysis and monitoring of the McCloy Creek crossing on Highway 41 continued.

Materials section undertook quality control assurance monitoring on 8 surfacing projects.

Increased use of micro-computers for lab and technical uses continued.

The district lab conducted 5,300 individual tests on various samples taken during field exploration activities. Over 500 km of highway route was tested in the field. 13 Marshall Mix designs were prepared.

The district gravel location section retested 22 existing deposits of sand and gravel plus four new sources. 690 000 m^3 of gravel and 380 000 m^3 of sand were verified at a cost of 9.0 cents per cubic metre.

Prince Albert District

The Prince Albert District is responsible for 6 226 kilometres of public and provincial highways. The district is also responsible for the maintenance and operation of the Uranium City and La Ronge Airports and the maintenance of nine gravel airstrips.

Design

Design staff completed 14 kms of final subgrade design during the year. Other design activities included:

- Arranging for the installation of lighting at the Highway 2 and 55 interchange north of Prince Albert.
- Arranging for the installation of lighting and a non-directional beacon at the Cumberland House Airport.
- Assessing requests for sub-divisions and developments in the vicinity of Provincial Highways.
- Many special studies on items such as drainage, highway safety and signing.

Construction

During the year the construction section supervised 28 major contracts which included three grading contracts, five grading and paving contracts, seven rehabilitation contracts including enhancements, nine crushing contracts, two mixing contracts and two sealing contracts. During the construction season 68.5 kilometres of subgrade was constructed and 132.5 kms of surfacing was completed. Some of the major projects completed in 1988 included:

- construction of an interchange at Highways No. 2 and No. 55 north of Prince Albert.
- completion of the subgrade construction on Highway No. 41 west of Melfort.
- resurfacing on Highway No. 2 south of La Ronge.
- resurfacing on Highway No. 3 west of Spiritwood.
- grading and resurfacing Highway No. 335 from the junction of Highway No. 35 to the east.
- resurfacing Highway No. 11 south of McDowall.
- resurfacing Highway No. 23 north of Crooked River.
- grading and paving on Highway No. 55 east of Carrot River and on Highway No. 12 south of Shell Lake.

In addition to these projects, there were also 32 kms of log haul roads built, 6.9 kms of resource roads, as well as oiling of some resource roads and campgrounds. Construction staff also supervised numerous spot improvement projects.

Maintenance

The highway system maintained includes 3 544 kilometres of gravel, 1 032 kilometres of oil treatment and 1 650 kilometres of pavement.

Some of the major maintenance activities carried out included:

- 420 000 m^2 of deep patching
- 172 kilometres of seal coating
- 35 kilometres of subgrade stabilization
- 400 kilometres of dust treatment on gravel highways

The maintenance work is accomplished primarily by 43 crews located in 26 communities and nine isolated camps throughout the district.

Rainfall was below normal resulting in less surface maintenance problems throughout the summer. There was normal snowfall in northern regions and below normal in the southern portion of the district. The good winter conditions resulted in approximately 2000 (30 per cent) less calls to the Prince Albert Hotline than in the previous year.

The district repair shop in Prince Albert provides the necessary repair and overhaul to an equipment fleet consisting of approximately 600 units which includes equipment assigned to Works Branch.

The barge operation on Wollaston Lake had one of its busiest years due to the construction of a new school at Wollaston Lake. The barge operated 103 days and made 234 round trips compared to 79 days and 164 round trips the previous year.

Materials

Materials section staff completed or supervised eight rehabilitation designs, two surfacing designs and three geotechnical assessments for Prince Albert and North Battleford Districts.

Gravel location crews identified and tested fourteen new sand and gravel prospects resulting in new reserves of 900,000 m^3 and potential haul savings of $1.5 million. Thirty-three existing sources were retested to verify quality and quantity. Approximately 40 kilometres of subgrade sampling and several hundred asphalt cores were completed to support subgrade and surfacing design projects.

Materials section crews conducted the district subdrain flushing and repair program. Ten systems were flushed and three repaired. In addition a materials crew was on loan to maintenance section to help with the deep patch and miscellaneous special construction programs.

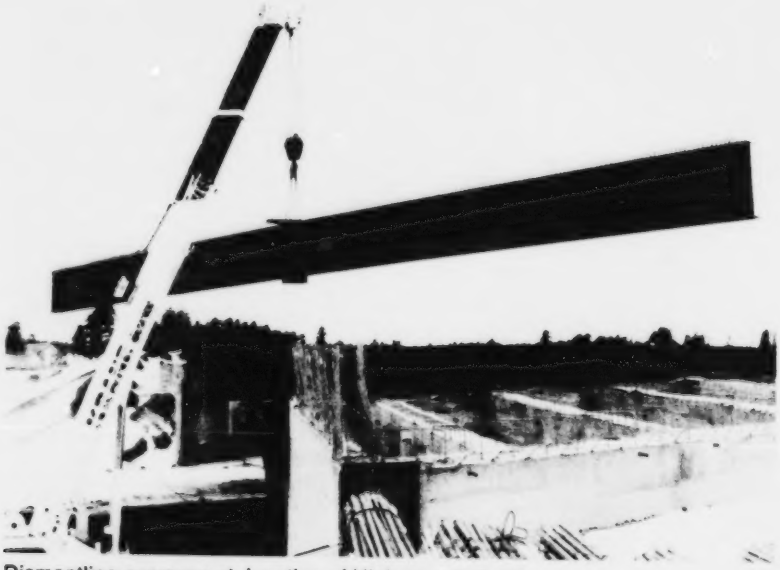
The district laboratory completed 8,000 individual tests on various samples. Eight Marshall Mix designs were completed. District lab staff also monitored the subdrain system condition, field piezometres and frost depth indicators.

Other Activities

In addition to the normal administration duties, district administration staff processed 62 materials requisitions, 121 gravel and sale of material invoices, 981 construction and maintenance material invoices and 494 custom work and barge billings. Excellent results were again achieved in the area of processing accounts for payment in a timely manner.

A total of seven communities participated in assistance programs that included Urban Assistance and Airport Assistance. Delineation lights were installed at 11 different locations.

Winter roads were operated from Cumberland House to Sturgeon Landing and from Highway 905 to Wollaston Lake.



Dismantling overpass at Junction of Highways 2, 3, 55

North Battleford District

The North Battleford District is located in the northwest corner of the province and is responsible for 3 763 kilometres of public and provincial highways. The district is also responsible for the operation and maintenance of the Meadow Lake and Buffalo Narrows Airports, as well as the maintenance of five gravel airstrips.

Design

Design section completed 106 kilometres of preliminary survey and 32 kilometres of final subgrade design. One tender package and 13 special projects were completed.

Materials

Pit recommendations were carried out for six surfacing contracts and five maintenance crushing contracts.

Eight gravel pits were retested, 22 resurveyed and six new sources tested.

Preliminary soils investigation was undertaken for three grading projects.

Check tests were carried out for all active construction projects.

Laboratory staff performed approximately 4,000 individual tests on various material samples taken during field exploration or construction activities.

Staff issued 24 permits to public institutions and private individuals who removed 63 720 m^3 of aggregate from department-owned pits.

Construction

The district's construction program was administered through seven major contracts and 12 miscellaneous contracts which included crushing, bituminous mix production, seal coating and rubber asphalt crackfilling.

During the year 22 kilometres of subgrade were constructed and 64 kilometres surfaced.

Subgrade construction was completed on Highway No. 303 from Turtleford to its junction with Highway No. 21. This comprised a total of 15.9 kilometres of construction.

Initial subgrade construction commenced on Highway No. 304 between Makwa and its junction with Highway No. 26. A total of 6.1 kilometres was constructed. The section of Highway No. 304 through the Village of Makwa was surfaced with hot mix bituminous surface course.

Surfacing of the west bound lanes on Highway No. 16 between Marshall and Lloydminster was completed. The west bound lanes were opened to the travelling public in November.

Resurfacing of Highway No. 17 north and south of Lloydminster was completed. A total of 12.9 kilometres south of Lloydminster and 23.4 kilometres north of Lloydminster was resurfaced. Resurfacing on portions of Highway No. 26 in the vicinity of Vawn and Turtleford was completed. A total of 9.3 kilometres was resurfaced.

Maintenance

The highways system maintained by district forces includes:

- 1 504 kilometres of gravel surface
- 939 kilometres of oil treated surface
- 1 281 kilometres of paved two lane surface
- 39 kilometres of paved four lane surface
- 81 kilometres of roadway in campgrounds and provincial parks

Maintenance is provided by 27 section crews, two airport crews and three special crews.

District shop staff provide repair service for a fleet of approximately 325 power units and numerous pieces of sundry equipment.

Maintenance forces used 9 076 600 litres of liquid asphalt, 225 692 tonnes of processed aggregate and 34 400 tonnes of bituminous mix.

The district tendered 169 kilometres of seal on oil treatment, 26 kilometres of seal on construction and 97 kilometres of rehabilitation seal. Approximately 1 825 hectares of right of way mowing was tendered as well as tenders for 48 kilometres of crackfilling, three gravel blading tenders, one campground maintenance tender, two hydro-axe tenders and ditch clean-up.

Eighty five kilometres of subgrade were stabilized with clay or calcium chloride. In addition, 52 kilometres of the Cluff Lake road was gravel stabilized with 10 900 tonnes of crushed aggregate.

Dust treatment with calcium chloride and calcium lignosulphonate was completed on 144 kilometres of northern roads.

131 tonnes of lime were used to improve the subgrade on various sections of oil treatments.

The district tendered the crushing and stockpiling of 58 300 tonnes of traffic gravel and 164 200 tonnes of bituminous repair aggregate. In addition, 38 760 tonnes of bituminous mix were tendered.

For winter maintenance, district forces used 5 100 tonnes of salt, 6 600 tonnes of sand and 18 100 litres of calcium chloride. This effort was required to maintain good winter driving conditions in a year where snowfall was two-thirds of the long term average.

Highlights this year included the transfer of responsibility of a number of sections of roadway. In late summer Highway No. 303 east of Lloydminster was extended an additional 12.4 kilometres following road upgrading to highway standards by the Rural Municipality. Effective October 31, 1988 the department transferred responsibility of 2.1 kilometres of Highway No. 17 to the City of Lloydminster following rehabilitation of the roadway surfacing structure. Approximately 9 kilometres of abandoned Highway No. 4 in the vicinity of Turtle Lake was scarified to allow natural reforestation and title transferred to Saskatchewan Parks, Recreation and Culture.

Other Activities

Safety improvements included the flattening of approach sideslopes on Highway No. 3 from its junction with Highway No. 17 to the Deer Creek Bridge.

Approach guardrails were installed on two bridges.

Under the miscellaneous construction program a subdrain system was installed on Highway No. 21 on the south approach to the Beaver River to alleviate on-going maintenance problems.

Under the recreational area improvements program a seal coat was applied to the roadways in the camping area at the Greig Lake Campground and the boat launch parking lot at Stabler Point in the Makwa Lake Provincial Park. Surfacing was carried out on portions of the Greig Lake Campground and the service centre parking lot at Stabler Point. Construction of a parking lot at Helene Lake was also undertaken and completed.

A total of four communities participated in the department's assistance programs including Urban Assistance, Airport Assistance and Urban Traffic Safety Programs.

Delineation lights were installed at six highway intersections.

Approximately 25 subdivision proposal requests were reviewed and recommendations were made.

Summary of Kilometres of Work Accomplished 1988-1989

			Grading		Surfacing					
Control Section	Location	Dist.	Comp.	U.C.	Pave. A	Pave. C	Pave. D	Rehab.	U.C.	Spot H.B.C.
1 - 01-00A	Resurf Man Border to Moosomin	2						18.15		
1 - 05-00A	Grading and Paving Passing Lanes Indian Head to Grenfell	2	6.60		6.60					
1 - 10-00A	Resurf 3.2 km East of Jct 301 to Jct 2	2						4.50		
1 - 11-00B	Resurf 3.2 km East of Jct 301 to Jct 2	2						4.81		
1 - 12-00B	Resurf 3.2 km East of Jct 301 to Jct 2	2						5.54		
1 - 13-00B	Resurf East to West of Mortlach	2						13.38		
1 - 13-00B	Resurf East to West of Mortlach	2						9.79		
1 - 14-00A	Resurf Parkbeg to Secretan	1						11.00		
1 - 16-00A	Resurf Morse to Herbert	1						3.30		
1 - 16-00B	Resurf Morse to Herbert	1						17.56		
1 - 19-00A	Pavt A W of Webb to W of Gull Lake	1			17.88					
1 - 19-00B	Resurf Webb to Gull Lake	1			0.38			8.00		
1 - 20-00B	Pavt A W of Webb to W of Gull Lake	1			5.00					
2 - 09-00A	Spot Impr Findlater-Holdfast km 10 to 10.6	2								1.95
2 - 20-00A	N. Abut Dief. Bridge km 37.35 Jct. No. 263	5	1.14		1.55					
2 - 20-00B	N. Abut Dief. Bridge km 37.35 Jct. No. 263	5	0.92		1.39					
2 - 20-6LB	N. Abut Dief. Bridge km 37.35 Jct. No. 263	5	0.67		0.67					
2 - 20-6RA	N. Abut Dief. Bridge km 37.35 Jct. No. 263	5	0.62		0.68					
2 - 23-00A	Resurf Two Forks River to Jct 165	5						1.00	15.20	
3 - 01-00A	Grading Man Border to W of Armit	3	15.10							
3 - 07-00A	Jct. Hwy 36 (Melfort) Kinistino Grid and Int. Treatment	5	0.55		0.55			0.00	15.20	
3 - 09-00A	Spot Impr Muskody to P.A. km 14.63 to 33.73	5								7.90
3 - 11-00A	Emb for Grade Separation at Jct 2 (WCL)	5	1.15		1.15					
3 - 11-00B	Jct. C.S. 55-09 (P.A.) to km 43.09 (Shellbrook)	5	1.15		1.15					
3 - 11-6LA	Hwy 2 and 3 Interchange and Hwy #3 Ext.	5	0.27		0.93					
3 - 11-6RA	Hwy 2 and 3 Interchange and Hwy #3 Ext.	5	0.89		0.89					
3 - 15-00A	Resurf km 2.0 to km 20.7 W. of Spiritwood	5						18.30		
4 - 07-00A	Resurf South of Elrose	1						13.00		
4 - 09-00A	Spot Improvement South of Biggar	1								3.00
4 - 10-00A	Resurface South of Biggar	1						23.10		
4 - 10-8LA	Oil Treatment km 0.0 to km 0.21	1					0.21			
5 - 03-00A	ENR Canora Westerly	3						6.54		
5 - 07-00A	Resurf Humboldt West 19 km	4						18.76		
5 - 08-00A	St. Denis Access Type A Int. Treatment	4	0.54							0.54
7 - 04-00A	Resurf Rosetown Easterly	1						11.57		
9 - 02-00A	ENR S of Carlyle km 35.80 to 39.00	2						17.10		
9 - 03-00A	Extend Intrsec to North km 10.78 and Misc. Work	2								3.13
9 - 09-00A	Intersection Treatment km 47.24	3						1.54		
9 - 10-00A	ENR Canora Northerly	3						7.95		
9 - 12-00A	Grading N of Preeceville to Usherville	3	16.15							
9 - 12-40A	Grading Endeavour Access Road	3	1.92							
10 - 06-00A	Resurf Fort Qu'Appelle to Balgonie and Ramps	2						35.57		
11 - 05-00B	Grading N of Girvin to S of Davidson	2	6.95		6.95			1.20		
11 - 10-6LA	Entrance Ramp Marquis Drive to Hwy #11	4			0.60					
11 - 11-00A	ENR Hague to Rosthern	4						10.18		
11 - 12-00A	Double Type A Intersection Treatment @ Jct No. 312 km 18.12	4								0.20
11 - 13-00A	ENR McDowell Northerly	5						9.05		
12 - 01-00A	Loadometer Site km 4.46	4								0.38

			Grading		Surfacing					
Control Section	Location	Dist.	Comp.	U.C.	Pave. A	Pave. C	Pave. D	Rehab.	U.C.	Spot H.B.C.
12 - 03-00A	Jct No. 40 and 12 at Blaine Lake to km 39.13	5	15.86			15.86				
12 - 04-00A	Leask Grid to Jct No. 3 at Shell Lake	5	0.30			0.30				
13 - 01-00A	Base Overlay Manitoba Border to Redvers	2						19.40		
13 - 08-00A	Grading West of Ogema to West of Jct 34	2	14.31							
13 - 09-00A	Jct No. 13 and 34 to km 30.64	2	5.39							
15 - 03-00A	Pvt A Jct 9 to E of Melville	3			22.48					
15 - 13-00A	Resurf Jct No. 42 to Sovereign	1						16.61		
16 - 11-00A	Resurf Langenburg to Churchbridge	3						13.71		
16 - 18-00A	W Jct No. 16 and 20 Intersec Treatment	4	0.20							0.20
16 - 19-00A	Type A Intersection Treatment	4	0.20							0.20
16 - 22-00A	Spot Improv on Idylwyld Drive North in Saskatoon	4								1.40
16 - 22-00B	Spot Improv on Idylwyld Drive North in Saskatoon	4								1.40
16 - 22-6LA	Spot Improv 42nd St to km 2.32	4								0.64
16 - 22-6RA	Spot Improv 42nd St to km 2.32	4								0.55
16 - 23-00A	ENR Saskatoon to Langham	4						4.83		
16 - 23-00B	Grading Jct 11 (N of S'toon) — E of Langham	4	1.10		15.50					
16 - 23-40A	Jct Hwy #11 Saskatoon Westerly	4			0.60					
16 - 24-00A	Rehab Borden Bridge to Borden	4						5.25		
16 - 29-00A	Grading Marshall to E of Lloydminster	6	0.31		2.71					
16 - 30-00A	Grading and Paving E of Marshall to E of Lloydminster	6	0.71		15.26					
16 - 30-00B	Grading and ENR Marshall — East of Lloydminster km 32.3-14.6	6	13.96		13.96					
17 - 05-00A	Rehab Lloydminster Southerly	6						12.93		
17 - 06-00A	ENR Lloydminster to Hwy 3	6						23.07		
17 - 07-00A	ENR Lloydminster to Hwy 3	6						0.30		
18 - 13-00A	Realign Grid Rd Intersec to Impr Sight Dist km 9.4	1								0.80
23 - 01-00A	ENR Weekes to Somme and C.S.23-02	3						3.25	11.68	
23 - 04-00A	Overlay 2 Sec Jct 3 — S of Jct 335	5						20.30		
26 - 02-00A	Resuf 2 Sec Near Turtleford	6						9.30		
30 - 02-00A	Eston to Brock Lime Modify Subgrade	1								7.00
31 - 03-00A	Grading Luseland to Salvador	1	3.81	10.39						
32 - 04-00A	Pavt A Leader Easterly	1			5.75				5.43	
35 - 10-00A	Resurf Jct No. 15 to Bankend	3						12.50		
35 - 12-00A	Overlay Wadena — S of Hendon	3						6.31		
35 - 13-00A	Resurf Jct No. 49 to Rose Valley	3						15.50		
38 - 02-00A	ENR North of Perigord to Greenwater	3						18.40		
39 - 03-00A	Resurf Hitchcock to Midale	2						21.80		
39 - 05-00A	Resurf McTaggert to Yellow Grass	2						10.60		
39 - 06-00A	Hot Mix Surf Course at Var Locations	2								4.30
39 - 08-00B	Resurf Drinkwater to Jct 1	2						20.96		
41 - 01-00A	Jct No. 6 to 1.6 km East of Jct No. 368	5	15.40							
41 - 01-00A	Grading 1.6 km East of No. 368 to East of Meskanaw	5	15.35							
41 - 01-00A	Grading W of Ethelton to W of Yellow Creek	4	14.17							
41 - 01-70A	Jct No. 41 to Jct No. 3	5	3.37							
41 - 03-00A	Jct No. 2 to Jct No. 27 (km 51.29)	4						0.33		
41 - 04-00A	ENR Aberdeen to Jct 5	4						6.00	8.00	
44 - 06-00A	Overlay Plato to Eston	1						21.21		
44 - 07-00A	Supplemental Agreement to Contract 87099	1						2.33		
55 - 02-00A	Replace Bridge	3								0.10
55 - 04-00A	Pvt C Mixing and Laying Jct 123 Easterly	5			9.70					
55 - 09-00A	Jct No. 120 (Meath Park) to km 41.79	5	0.48					4.94		
55 - 09-6RA	Jct No. 120 (Meath Park) to km 41.79	5	0.12		1.29					
210 - 02-00A	Resurf Jct 10 to Echo Valley Park	2						0.00	12.12	
303 - 01-00A	Grading W of Turtleford to Jct No. 21	6	9.27							
303 - 01-00A	Grading Turtleford to 12 km to Jct No. 21	6	13.09							
303 - 02-00A	Grading West of Highway 2 (Payment to R.M.)	6	12.41							

Control Section	Location	Dist.	Grading		Surfacing					
			Comp.	U.C.	Pave. A	Pave. C	Pave. D	Rehab.	U.C.	Spot H.B.C.
304 - 01-00A	Grading East of Makwa to Hwy 26	6	0.00	15.45	0.63					
335 - 01-00A	Grading and Paving Jct No. 35 Easterly	5	11.39			9.36				
357 - 01-00A	Togo to km 20.37 (Jct No. 8)	3	0.63							
361 - 12-00A	Grading Alida to Jct Grid 603 and Alida	2	12.30	4.67	0.00				16.97	
364 - 01-00A	Grading Balgonie to Edenwold	2	7.95	10.13						
953 - 01-00A	Oiling Anglin Lake Rd Jct No. 263 to km 10	5					17.90			
	DISTRICT NO. 1		3.81	10.39	29.01	0.00	0.21	127.68	5.43	10.80
	DISTRICT NO. 2		53.50	14.80	13.55	0.00	0.00	182.80	29.09	9.38
	DISTRICT NO. 3		33.80	0.00	22.48	0.00	0.00	85.70	11.68	0.10
	DISTRICT NO. 4		16.21	0.00	16.70	0.00	0.00	45.35	8.00	5.51
	DISTRICT NO. 5		69.63	0.00	19.95	25.52	17.90	53.59	30.40	7.90
	DISTRICT NO. 6		49.75	15.45	32.56	0.00	0.00	45.60	0.00	0.00
	PROVINCIAL TOTALS		226.70	40.64	134.25	25.52	18.11	540.72	84.60	33.69
	1988-89 GRAND TOTAL		978.99							

Control Section — A permanent unit of the highway system which becomes the basic reporting unit for construction and maintenance costs, service life characteristics, and various other data.

Grading — Completed (Comp.) — Grading completed within the year being reported.

Grading — Under Construction (U.C.) — The under construction portion of the project which is being carried over to be done in the next construction season.

Rehabilitation — Work such as pavement resurfacing, carried out to restore a roadway to the standard to which it was constructed. This is warranted when maintenance operations are no longer adequate or appropriate. Differs from upgrading in that the design standard is not improved.

Pavement "A", "B", "C", and "D" — Represents different types of surfacing structures.

Oil — Oil treatment. Cold asphalt mix surface treatment of nominal thickness.

Surfacing — Under Construction — The paving portion of the project which is being carried over to the next construction season.

Engineering Division

The Engineering Division is responsible for the development of policies, standards and procedures for the design, construction and maintenance of the provincial highway system.

Emphasis has continued on the development and enhancement of information systems for use by department managers.

Evaluation and selection of a micro computer based earthwork program and electronic notebooks was initiated.

Field data collection was automated in some areas using lap top computers.

The implementation of the Pavement Management Information System resulted in an assessment and pilot project using a Geographical Information System. This system, when implemented, will allow the production of maps of various information which was previously only available in textural form.

D. G. Metz
Executive Director
Engineering Division

Sherwin Petersen
Minister
Highways and Transportation

J. R. Sutherland
Deputy Minister

Don Metz
Executive Director

Al Popoff
Design and Traffic Safety Branch

John Palaschuk
Equipment Branch

Garry Heiman
Surfacing Branch

Barry Martin
Maintenance Branch

Al Widger
Geotechnical and Materials Branch

Geotechnical and Materials Branch

Mission Statement

To provide current geotechnical and materials policies, standards, specifications, procedures, testing and engineering expertise for the planning, design, construction and maintenance of the provincial highways, roads and airports; and to provide central laboratory services, specialized field sampling and data collecting for a safe, efficient and effective transportation system for the Province of Saskatchewan.

Standards and Policies

Work continued on many studies related to geotechnical standards and policies. A study was continued on pavement C construction, design, performance and required standard changes.

Work continued on the Manufactured Materials Manual. New specifications were developed for priming grade emulsions, and polymer modified emulsions. The salt specification was modified.

Work was started on End Product Specifications. The mix design policy was changed. A subgrade suction research project was completed at the test track with the University of Saskatchewan.

Consultation Services

Geotechnical and Materials Branch took part in approximately 11 design reviews as well as providing formal comments or recommendations on approximately 20 projects. Branch personnel conducted in excess of 80 job inspections to provide assistance, as well as attending 48 district meetings.

The branch provided ongoing technical support labour and supervision during the development of the test track instrumentation.

Branch staff participated in many department committees.

Lab Services

Renovations to the building were completed to accommodate the Southern Regional Compliance office. A new larger government conference room was created. Modifications to the lab area were made to improve utilization of existing space.

The Department Central Lab conducted more than 13,040 tests to evaluate materials for highway design, construction, maintenance and research. Tests were completed on 3,030 asphalt product samples to check for specification compliance. This was a 26 per cent increase in numbers of asphalt samples tested over 1987-88. Lab testing was conducted for the following special studies.

- Trichlorethane Alternatives
- Fractured Faces
- 75 Blow Mix Design
- Creep Testing
- Materials testing for Rubber Asphalt Crack Sealants
- Rutting Study
- Paint Rectroreflectivity
- Roller Compacted Concrete
- Intensive Testing of Asphalt Cements

Forty-eight nuclear density guages and five asphalt content meters were serviced and calibrated for use on construction projects.

The branch provided 60 portable labs and four coring machines to the districts for quality control testing on construction projects. Five new asphalt lab trailers and five soils lab trailers were obtained and equipped.

The Central Lab provided all laboratory services for Regina District as well as asphalt mix designs for Swift Current and North Battleford districts. A total of 30 Marshall Mix Designs were prepared. Speciality testing of asphalt mixes was provided for all districts. Central Lab provided all specialized soils testing for the department. Traffic paints were evaluated in order to pre-qualify materials for tendering. Quality control testing was completed on glass beads. Testing of salt was increased. Specialized testing services were provided for other agencies.

Central Lab participated in the National Asphalt Mix exchange and hosted the National Asphalt exchange program in order to ensure accurate testing procedures and results are achieved. A mini mix exchange was conducted with the district labs to check on uniformity of test results.

Site Investigation

Site investigations which included test drilling, soil sampling and soil property testing were completed on a number of small bridge sites. Drilling and sampling was completed for the Saskatchewan Water Corporation on the Grainland Project at Diefenbaker Lake using the barge. A total of 3 693 m of test holes were bored.

A joint site investigation research program with the University of Saskatchewan was continued. A final draft Site Investigation Manual was developed as a result of this work.

Monitoring of instrumentation and interpretation of data was continued on various sites throughout the province for long term analysis of landslide potential areas. A report covering all slope indicators being monitored was updated. Field data collection was automated using a lap top computer.

Surface Condition Testing

Benkelman Beam deflection tests were completed on 2 110 km of pavements resulting in a total of 15,000 tests. Additional sections were tested for urban assistance projects and for research purposes. A study was completed using historic beam data to improve data interpretation. Riding quality was assessed on 12 180 km of pavements and five runs on 8 450 km of oil treated surfaces using the car road meters for a total of 54 400 km of testing.

Skid tests were taken on major bridge decks and overpasses to detect or study slippery conditions for safety concerns.

The branch provided technical support and surface condition testing for PMIS. The PURD was used to collect surface condition data on 3 500 km of the highway system.

Staff Training

The branch reacted to the department's technical training needs by continuing its involvement in technical training. A total of 30 days of training were given in the following classes:

- Asphalt Lab Seminar (1 course)
- Lab Testing Techniques (1 course)
- Maintenance Basic Soils (3 courses)
- Maintenance Basic Asphalt (4 courses)

Branch staff took a number of development courses.

Environmental Liaison

Geotechnical and Materials Branch continued its role as the department's official liaison with the Department of Environment and Public Safety. This involves a compilation of the department's capital grading program for submission for environmental approval. The branch also reviewed and provided comments on environmental legislation or guidelines and represents the department on the Environmental Review Panel.

As the official liaison with the Department of Parks, Recreation and Culture on heritage resource concerns relating to the capital program, the branch submitted and received approval for the current projects as well as obtained clearance for projects on the long range program.

Design and Traffic Safety Branch

The mission of the branch is to provide current legislation, policies, standards, specifications, recommendations, advice, information and engineering expertise for the design and construction of provincial highways, roads and to manage traffic and accident data collection; for cost effective, efficient and safe transportation systems for the province of Saskatchewan. To achieve this mission the branch manages the following activities:

- developing standards, policies, procedures and specifications governing geometric design, hydraulic design, roadway illumination, roadside development and traffic control devices.
- providing specialized engineering guidance and advice to senior management, six districts, consultants, other branches, and other roadbuilding agencies on geometrics, hydraulics, roadside development, highway location, traffic control devices, data collection, traffic safety and traffic characteristics.
- providing traffic engineering services and guidance to the department and related agencies and manage data collection systems about traffic characteristics supplemented by special studies and projects.
- managing the traffic control devices along provincial highways to ensure uniformity and adequacy and to administer the private signing adjacent to highways.
- managing a central traffic accident information system for Saskatchewan and providing relevant data to all users.

Traffic Engineering Services

The objective of the section is to provide specialized traffic engineering services and guidance to the department and related agencies, to manage traffic data collection systems for traffic characteristics and traffic accidents and to undertake traffic operations and safety studies.

Traffic Accident Information System

The Traffic Accident Information System (TAIS) has now completed 10 years of successful operation. Detailed information about 380,000 traffic accidents is available for studying traffic safety. The data is being used extensively to develop and monitor countermeasure programs.

The tenth annual report which summarized the 1988 accidents was published and 4,000 copies were circulated. 1,000 posters highlighting TAIS information were distributed.

1,100 customized reports were distributed at year end to local governments. TAIS data was used by others to carry out special studies about truck accidents, daytime use of headlights and the involvement of young drivers in traffic accidents. Specialized reports were made available to user agencies on a monthly and quarterly basis.

Safety Improvements and Studies

The department continues to emphasize safety improvements on provincial highways. Improvements at problem locations and overall system safety improvements continue to be an effective means of upgrading the highway to reduce accidents and injuries. There has been a reduction of 24 per cent in the accident rate in the last 11 years on the provincial highway system.

The Design and Traffic Safety Branch carried out 50 intensive reviews concerning traffic operational problems, speed zone requests and accident prone locations. Four locations for railroad signalization were reviewed.

The study of Advance Warning Signals for railway crossings was undertaken. The influence of radar detector units on vehicle speeds was reviewed. Evaluation of passing lanes was started.

The Design Manual has been expanded to Part 2 to deal with traffic engineering topics. This new manual will deal with the standards, policies and procedures for traffic operations.

Traffic Analysis

The traffic analysis function, in addition to routine data collection, encompasses special traffic studies, research projects, and provides specialist advice and assistance on matters relating to traffic characteristics. Specific activities undertaken involved obtaining traffic volumes and vehicle classification counts on the provincial highway system. Travel on the provincial highway system increased by 3.0 per cent from 1987 to 1988.

Technical assistance was provided to the Weigh Scale Planning Committee, evaluation of weigh in motion/vehicle classification systems and planning and installation of traffic monitoring equipment for SHARP and C-SHARP locations, and the Estevan weigh scale technology package.

A technical paper entitled "Historical Analysis of Truck Traffic in Saskatchewan" was prepared and presented at the 1988 CSCE Conference.

Traffic Control Devices

Uniformity of traffic control devices is an important element in maintaining a safe and efficient highway system. Signs and signals have an important function in regulating, warning, guiding and providing information to the motorist.

During the year, seven policy/standards were completed for the Saskatchewan Traffic Control Devices Manual. Approximately 21,000 signs were ordered and delivered to fulfill the department's signing obligations.

Road Design

The Hydraulic Manual was updated through the additions of standards addressing wood box culverts, culvert equivalencies and fish passage. Culvert inspection guidelines were drafted for adoption by Operations Division. Updates were provided to six standards within the Design Manual.

The branch in keeping with the expanding computer capabilities of the department provided engineering programs for hydraulic calculations with respect to wood box culverts and a program for calculation of vehicle offtracking characteristics.

In the area of design enhancements considerable work was initiated in the areas of evaluating and selecting a micro computer based earthwork program, electronic notebooks and new topographic survey technology. Progress to date indicates an excellent possibility of implementation of a PC based program and electronic notebooks within the next 12 to 18 months.

In the area of technical training the branch delivered training seminars to district staff in the areas of roadway lighting utilizing the recently purchased software program and in culvert hydraulics in conjunction with C.D. Smith and Sask Water Corp.

The branch continued to provide on-going consultation with the districts and others with respect to geometric designs, culvert hydraulics, roadway lighting and roadside development, including the field review of designs as detailed by project scheduling.

Equipment Branch

Equipment Branch provides administrative, and technical guidance and expertise on all issues related to the department's equipment fleet. Major areas of responsibility are:

- Develop the annual Equipment Budget.
- Purchase all equipment and related items.
- Manage and operate the department's Equipment Management Information System (EMIS).
- Set rental rates for department owned equipment and for equipment used on Saskatchewan Highways and Transportation contracts and projects.
- Develop policies and procedures related to equipment repair and maintenance.
- Administer the department's mobile/radio telephone communications system.
- Provide technical guidance and expertise on equipment repair and operation.
- Administer the department's fleet of C.V.A. vehicles.

Equipment Fleet

The department's current fleet consists of 2,511 units, including trucks, tractors, graders, mowers, compactors, sweeper brooms, trailers, camp equipment and heavy construction equipment.

Fleet Operation

The cost of operating the department's equipment for the year was $19.1 million. Repairs cost $6.3 million, fuel and other operating costs $5.2 million, ownership costs were $2.8 million and $4.8 million was spent on equipment licences and administration.

Equipment Purchases

In 1988-89, $3.7 million was expended on new equipment acquisitions. The current capital cost of Saskatchewan Highways and Transportation equipment fleet is $67 million. 81 requisitions were raised to purchase major equipment, support equipment, and shop equipment and tools.

Rental Rates

Equipment Branch sets rental rates for equipment that is used on an hourly basis on highway construction projects. These rates are used as a guideline by the construction and roadbuilding industry. The rates were distributed to 300 contractors, equipment dealers, trucking firms, towns, cities and other government departments and agencies.

Rental rates for department owned equipment were calculated on a provincial basis. These rates are set to recover the costs of owning, operating, repairing and administering the department's equipment fleet.

C.V.A. Fleet

Central Vehicle Agency supplies cars and light duty trucks to the department. The department leased 203 units in 1988-89 on a nonmaintenance lease. Under this arrangement, the department is responsible for maintenance and operating costs and repays C.V.A. for purchasing the vehicles. 205 units were under a full maintenance lease. The department pays for the units based on the number of kilometres driven. C.V.A. bears all costs for operating and maintenance.

Maintenance Branch

The mission of Maintenance Branch is to provide current legislation, policy, standards, specifications and engineering expertise for the maintenance and protection of provincial highways, roads and airports; and to manage the weights and dimensions permit program and the pavement marking program for a cost effective, efficient and safe transportation system for the Province of Saskatchewan.

Program Standards

The department maintained 25 502 km of provincial highways and provincial roads during 1988-89. This increase of 675 km over the previous year reflects an internal change in classification for four lane highways. Each roadway is counted separately to provide better management where the age or design standards of adjacent roadways may be significantly different. The system was composed of 10 076 km of staged or standard pavement, 1 596 km of light pavement, 8 026 km of oil treatment and 5 804 km of gravel. The highway system consists of 701 km of four lane highways and the two lane highways are divided into 2 784 km of arterial highways, 6 267 km of collector highways, 9 720 km of local highways and 5 329 km of provincial roads. The department also maintained 433 km of tourist facility roadways and sites.

The approved 1988-89 maintenance budget level of $87.48 million represented no change from the 1987-88 budget level. Despite this, the department was able to meet or exceed its objectives for surface maintenance. The Riding Comfort Index on oil treatments met the 5.7 objective. This was achieved due to the use of new equipment which provides for easy recycling of existing oil treatments to improve the ride. The exceptionally hot and dry weather during 1988 was also felt to be a contributing factor.

The Maintenance Practice and Procedures manual reached 95 per cent completion as seven new sections were added and 52 sections were revised. The Maintenance Policy and Standards manual reached 97 per cent completion as one new section was added and 13 sections were revised.

Fifteen reports were prepared for senior and district management analyzing maintenance costs, procedures and organization. The base maintenance allotments were updated for the 1989-90 budget and assistance was given to Operations Division in preparing the budget document. The budget reflected the continuing high demand for maintaining gravel highways in northern Saskatchewan.

Pavement Marking

The branch striped 23 013 km of centreline and 20 081 km of shoulderline. The total striping was 1094 km above the original objectives. A total of 21 724 pavement signs were also marked, compared to an original objective of 21 000. By December 15th, over 99 per cent of the highway system, including 100 per cent of the arterial highways, was at a service level of three or better. Three airports were striped during the year, all by private contractors. The department continued its new program of providing long life "permanent" markings in high wear areas near urban centres. In 1988 a total of 5382 m of stripe were applied. The new interchange at Prince Albert was also striped with permanent markings as part of the capital work.

Design and development of a prototype striper was virtually complete during the year. This equipment will apply a two component long life pavement paint with an air atomized system. It's success will give a Saskatchewan paint company the opportunity to market a two component paint developed in Finland. It will also provide the department with a relatively inexpensive permanent marking which was not available previously. Successful design testing in the fall of 1988 will allow full production testing in 1989.

Weights and Dimensions

During the year a total of 36,184 permits were issued for overweight and overdimension loads. This represented an increase of 427 or 1.2 per cent over the previous year, and it is 600 or 1.7 per cent above the average of the previous five years. The 27,514 permits issued by the permit office in Maintenance Branch was the highest number ever. It was 3,790 or 16.0 per cent above the previous year and it was 2,672 or 11.3 per cent above the previous highest year. The number of permits issued by the districts was 64 indicating a continuing decline due to the presence of the CPO 24 hour service and the introduction of a toll-free number in the Maintenance Branch permit office. The number of weight and dimension permits issued by the Central Permit Office decreased to 8,606 compared to 11,263 in 1987-88.

The branch was heavily involved in the development of a new Automated Permit System in cooperation with the Motor Carrier Regulation Branch and Sask Auto. This system will combine weight and dimension permits, registration permits and operating permits into one system which will calculate all fees and prepare customer statements.

New weight and dimension regulations were developed and put in place on August 9 as part of the National agreement to promote uniformity in heavy vehicle weights and dimensions. Saskatchewan was the first province to have their regulations in place. The branch head continued to represent the province on the Interjurisdictional Committee on Vehicle Weights and Dimensions. This committee continued research on other vehicle configurations and met with industry and interested groups to discuss proposed regulatory changes.

The Weights and Dimensions Administration manual had nine sections revised or added. A new brochure explaining the new regulations was developed and distributed throughout the province. Assistance was also given to the Regulation and Traffic Safety Division to develop new fees based on increased gross weights and the relative damage to pavements based on vehicle configurations and axle weights.

Surfacing Branch

Mission Statement

The mission of Surfacing Branch is to develop and review surfacing policies, annual rehabilitation programs and gravel resource information and provide consultative services on pavement design, construction and maintenance.

Pavement Management/ Rehabilitation Program

The Pavement Management Information System (PMIS) is able to access the Highway Inventory Information System, Traffic Accident Information System, Traffic Information System, the Maintenance Management Information System and the Riding Comfort Index systems through the corporate data base. Adding pavement condition files, deep patch records, soil classifications, with road user cost models and pavement performance models, we can evaluate numerous rehabilitation and upgrading strategies.

The evaluation will aid department managers in developing highway programs that will result in an efficient transportation system for the future. The PMIS system will produce system status in terms of funds required, quality of service, road user cost and materials required to operate the highway system in the future (up to 20 years).

The development of PMIS lead the branch into evaluating a Geographical Information System (GIS) to effectively produce graphic information from PMIS. The pilot project was successful using MunMap GIS product produced by a local software developer. This GIS system will allow the department to produce maps of various information that previously was produced in textural form. There is a potential that future highway maps could be produced using the computer graphics.

The annual rehabilitation program was developed for a two year program with the aid of Regina District's Materials Engineer due to staff changes in the branch. The 1988-89 rehabilitation program ratings reviewed over 1 500 km of highway to develop a $46 million rehabilitation program.

Standards and Policy

Mix designs were evaluated to minimize rutting on high volume highways. As truck transportation is being made more efficient with increased weights and new tire technology, asphalt concrete will have to withstand these higher loads in the future. Test sections were placed using polymer modified asphalts which are designed to reduce rutting at high temperatures and not crack at low temperatures.

Commmittees have been set up to develop End Product Specifications for pilot projects in the 1990/91 construction season. End Product Specifications give the contractor more responsiblity in the production of his product. The quality of construction is usually better when contracts are administrated under End Product Specifications.

Staff Training

The branch co-ordinated the equipment training course that was attended by contractors/consultants and department staff. The purpose of this course is to help improve quality of pavement construction by improving the knowledge of how equipment operates.

Administrative Section

Mission Statement

The mission of the administrative section is to facilitate the efficient operation of Engineering Division by providing administrative support in the areas of drafting, secretarial services, data entry, budgeting, electronic technology and by coordinating the airphoto program, gravel resource inventory, and roadside development applications.

Airphoto Library

There were two contracts for airphoto work in 1988-89. Library staff acquired 3 451 km of photography and prepared 200 mosaic sheets.

There is a continued on-going program to up-date photography of our provincial highway system. Current photographs are necessary for highway planning, design and construction.

Roadside Development

Approximately 300 development permits were issued and 250 subdivision requests were reviewed.

In 1988-89 the issuing of roadside development permits was decentralized to the district offices.

Gravel Resource Inventory

The division has information on approximately 4,000 gravel resource areas in the province. The department owns and leases approximately 1,800 gravel resource areas.

Electronic Technology

The administrative section has initiated the use of computer aided design for drafting of standard plans for department manuals. In addition, desktop publishing is used for seminar and course presentation material, newsletters, report formatting, etc.

Transportation Planning and Research Division

Sherwin Petersen
Minister
Highways and Transportation

J. R. Sutherland
Deputy Minister

Phil Pearson
Executive Director

Roger Couturier
Planning Support
Branch

Neil Petrovitch
Transportation
Policy Branch

Bernie Churko
Transportation
Systems Branch

George Stamatinos
Technical Research
Branch

Masood Hassan
Capital Planning
Branch

The Transportation Planning and Research Division completed its fifth full year of operation in 1988-89. The division responds to a wide variety of issues as outlined in the mission statement.

- To formulate policies and programs for the purpose of developing improved transportation systems for the province and to plan for a safe, efficient integrated multi-modal transportation system.
- To prepare initiatives, interventions and responses to further the best interests of Saskatchewan transportation users.
- To provide information and specialized technical assistance to other departments and agencies of the provincial government and to communities, carriers and transportation users within the province.
- To arrange for the provision and co-ordination of the technical research required by the department.

During the year the division participated in discussions with National Transportation Agency officials concerning monitoring objectives covering the impact on air transportation of the new National Transportation Act and the requirement of a major five-year review.

There was on-going development, monitoring and co-ordination with governments and the private sector on physical distribution management within the province. The division facilitated the development of a proposal from a private group, Container Port of Saskatchewan Corporation, to the federal Western Diversification office and the Saskatchewan Economic Development Corporation to assist in financing an inland container terminal facility.

Discussions were held with officials of the western provinces and the National Transportation Agency concerning surveys to monitor the performance of the new National Transportation Act.

Significant efforts were made on monitoring and facilitating the transportation of freight into the Lake Athabasca region. In 1988 there were 12,390 tons hauled on the Athabasca system by barges. This compares with 10,939 tons in 1987. The increase in tonnage is largely due to construction material hauled into the region for construction of the SPC power line. This tonnage will not be sustained in future years.

Agreement was reached with Transport Canada on a new agreement for continuing the operations of the federal airport at Uranium City. The agreement will expire on August 31, 1991.

The existing Wollaston Lake barge system was studied to determine the scope and type of improvements required to improve the level of service being provided to the community of Wollaston Lake. The existing barge has been determined to be able to meet the transportation demands for the foreseeable future. The recommendations of the study are being implemented within the next year or so.

During the year a major study into the accident experience of large trucks in Saskatchewan was undertaken. This is particularly relevant since the growth rate of large trucks is greater than the general vehicle population.

A major project was established to demonstrate the application of weigh-in-motion technology at the new Estevan weigh scale. The equipment is scheduled to be installed by late 1989.

Participation has been maintained in both the Strategic Highway Research Program and the Canadian Strategic Highway Research Program. Provincial highway sites have been selected at six and three locations respectively for these studies. These long-term studies are researching pavement and bridge performance.

A quarterly newsletter was initiated to disseminate research information within the department, to other provincial agencies and to academic institutions. This newsletter has been well received.

In response to a request from TRIP/CANADA, an update study on the reconstruction and resurfacing needs on provincial highways was completed. The study outlined the reconstruction and resurfacing needs of the provincial highway system for the next five years.

Development continued on the road/rail demonstration project which would use a vehicle capable of moving rail cars on branch lines and also travel between branch lines on roads. A producer owned cooperative is scheduled to operate this system on two branch lines in south-central Saskatchewan. The purpose of this project is to assess the feasibility of this concept in the transportation of grain.

P. M. Pearson
Executive Director
Transportation Planning and
Research Division

Transportation Systems Branch

The mission of the branch is to develop and recommend policies, administer programs, and provide specialized technical assistance leading to improvements in cost effectiveness, safety and adequacy of surface transportation systems.

Road Section

Bulk Commodity and Timber Transportation Policy

The road section staff negotiated several new agreements with shippers regarding industrial truck hauls pursuant to the terms and conditions of these policies. These included major agreements with NorSask Forest Products Inc. and Murphy Oil as well as a number of other agreements covering road fees and vehicle configurations pursuant to existing agreements. The staff continued to administer all of the industrial truck haul agreements.

Staff initiated discussion with the logging industry regarding a permit suspension policy. As well, in concert with the industry and other sections of the department, a new tendering procedure for the construction of multi-purpose logging roads funded by the department was developed.

Overlength Vehicle Program

Major revisions were made to the Overlength Vehicle Program to reflect overall changes to the vehicle weights and dimensions regulations. New agreements were signed with Atomic Transportation System Inc., Clarkson Transport, H & R Transport, Arnold Bros., and Transx. Staff continued to monitor the performance of all carriers participating in the program.

Staff also worked with the Northern Institute of Technology in making revisions to the Overlength Vehicle Course. This course is a prerequisite for drivers operating equipment pursuant to this program. The changes were necessary as a result of the changes made to the program in 1987/88.

Interim Weight and Dimension Adjustment Program

This program enables commercial carriers to obtain permits to operate eight axle "A" and "C" train combination trailer units at weights of up to 62.5 tonnes depending on hitching hardware. Currently there are 16 carriers participating in this program. In an effort to streamline the program, staff developed a long term trailer permit that is valid until 1997. This type of permit replaces one that was issued on an annual basis. Permits were issued as required throughout the year.

Aggregate Transportation Policy

Staff have entered into several agreements with rural municipalities enabling them to obtain permits for crossing provincial highways while hauling gravel at weights in excess of legal limits. The program is on-going and will remain accessible to all rural municipalities.

National "C" Dolly Specifications

Staff continued to work with the National Research Council and RTAC in the development of design, operating and maintenance specifications of dual drawbar "C" dollies. It is anticipated this work will be ready for presentation to the Transportation Ministers by September next year.

Transportation Technology Development Program

The road section administered the Transportation Technology Development Program which is designed to encourage the private sector to pursue new technologies for bulk hauls. These technologies will improve productivity and safety while increasing road life. Staff from the road section were involved with the following projects:

Equipment Demonstration and Evaluation

The road section continued to work with several carriers in the evaluation of new equipment. A final report was prepared for three new trailer to trailer hitching devices being demonstrated by Trimac Transportation Services and Federated Cooperatives Ltd. The first device is a controlled or mechanically steering "C" dolly, the second is an "A" train rear trailer stabilizer arm and the third related to the development of a new steering axle centering mechanism for a self steering "C" dolly.

A report was also prepared for a demonstration project undertaken in cooperation with Weyerhaeuser Canada Ltd. and BeeLine Welding. This project involved designing and constructing a quad axle logging trailer with an offset axle suspension.

Tri Axle Drive Power Unit

Discussions were held with Kenworth and several Saskatchewan carriers regarding the development of a power unit with three driving axles all located at the rear of the vehicle. The unique feature of the concept is that one of the rear driver axles is steered mechanically, a prerequisite for satisfactory performance of tri axle drive power units.

Logging Trailer Retrofitting

Staff worked with the Saskatchewan Research Council, local trailer manufacturers and the logging industry in developing a method for converting tandem axle logging trailers to either tri or quad axle configurations.

Miscellaneous Vehicle Evaluation

The road section co-operated with several industries and carriers in the preliminary evaluation of new transportation equipment for the logging and petroleum industry. Several of these concepts could result in field demonstration projects in upcoming years.

Federal Branch Line Abandonment Study

Branch staff continued to represent the department on a study initiated by Transport Canada in April, 1987 to develop a methodology for measuring the impact of branch line abandonment on provincial roads in Saskatchewan. This has involved participating on a study team as well as reviewing work prepared by Transport Canada for this study.

The study, completed in December 1988, concluded that there is potential for significant impact on provincial highways and municipal highways due to abandonment. The study estimated that the impact from abandoning nine existing high cost railway branch lines could approach $57 million for road upgrading. The report also concluded that the structural capacity of the thin membrane pavements and unpaved roads that are unique to Saskatchewan can vary considerably throughout the year, to the point where one or two truck passes can cause failure, and that there is a need to develop a standard for these roads that is capable of accommodating the increased traffic for considerably less cost than conventional pavements.

High Cost Grain Dependent Branch Line Study

In the summer of 1987 the Senior Grain Transportation Committee (SGTC) sponsored a study of six high cost grain dependent branch lines in western Canada. Dr. Jim Leibfried was given a mandate by the SGTC to meet with industry and producer representatives, evaluate the costs associated with various rail service options, and report back the results to the SGTC. Branch staff were asked to provide road costs for the Preeceville, Dunelm, and Central Butte Subdivisions in Saskatchewan. A summary report was prepared for senior department officials outlining the results of the study. Road impact costs varied widely depending on the rail line being considered but, in general, had a significant influence on Dr. Leibfried's findings.

Pavement Response To The Staggered Axle Suspension

Pavement response to the experimental staggered axle was initially analysed by the Alberta Research Council in the summer of 1987. Similar testing is planned for the department's new test site, which was completed in October 1988. The branch supplied the Weyerhaeuser stub axle logging trailer for the initial calibration tests carried out at the test site in November. Full scale testing is tentatively planned for the fall of 1989 or spring/summer of 1990.

Weyerhaeuser Timber Transportation Study

The road section undertook a major study of Weyerhaeuser (WCL) planned roundwood haul to determine incremental road costs and truck operating costs for numerous vehicle configurations and axle load combinations. A road cost computer mould was extensively modified and another model for truck operating costs was developed for this study. Based on the results of the study, WCL has decided to utilize the six axle semi trailer as its basic haul vehicle, although arrangements have been made that will enable operators to use other configurations if they so desire.

Rail Section

Road/Rail Demonstration Project

The rail section is continuing its activity in facilitating a road/rail demonstration project. The road/rail concept involves the use of a hybrid hi-rail tractor capable of travelling on existing roads and moving onto branch lines for spotting and picking up grain cars at elevator points along the line for interchange with a main line carrier. The road/rail vehicle is new technology being developed in the province to improve the efficiencies of moving grain off low volume – high cost branch line. The purpose of the demonstration project is to assess the feasibility of this concept in actual grain collection.

Adhesion tests performed by the National Research Council in Ottawa contributed to the completed design of the road/rail vehicle. The patenting process for the road/rail vehicle and its various componentry was commenced in both Canada and the U.S.A. by the province. A business and operating plan for this project was also completed to assist with the implementation of the project.

Southern Rails Co-operative Ltd., a producer owned co-operative has organized to operate the road/rail short line in two locations in south central Saskatchewan; the CP Colony Subdivision from Killdeer to Rockglen and the CN Avonlea Subdivision from Avonlea to Parry. Negotiations with the federal government for funding of the operation continued.

An Analysis Of The Contribution Levels For Saskatchewan Rail Traffic

The rail section completed its analysis of the rail freight rates charged for traffic originating in Saskatchewan compared to the long run variable costs incurred by the railways to transport the same traffic. The study concluded that rail freight rates charged for Saskatchewan commodities were substantially higher than their associated long run variable costs and that the contribution by Saskatchewan traffic was excessive relative to the national rail system average contribution. A draft final report has been submitted to senior department officials.

Railway Costing Review

Under the Western Grain Transportation Act the federal government annually determines the freight rates for moving grain. The section made submissions on rail costing methodologies including a submission on the railway cost of capital for the movement of grain. The arguments put forward by the rail section contributed to reduction of producer freight costs by some $26 million.

Saskatchewan Railway Act

Bill 100, a new Saskatchewan Railway Act, replacing the current 1906 Saskatchewan Railway Act received first reading in the provincial legislature. The Bill is drafted to respond to current rail transportation requirements of the province. Engineering regulations, pursuant to Bill 100 were completed in draft form.

Branch Line Rehabilitation Program

The rail section carried out an in-depth analysis of those branch lines in Saskatchewan that were eligible for upgrading under the 1984 Rehabilitation Agreement but had not been fully rehabilitated. The program which was to have terminated in March 1990 had sufficient funding to upgrade only one-quarter of the remaining eligible lines. The purpose of this study was to develop an upgrading program from a Saskatchewan perspective that optimized the available funds. The program was subsequently cancelled one year early by the federal government in April 1989.

Western Low Sulphur Coal To Ontario Study

Western Canadian coal accounts for a small portion of Ontario Hydro's fuel consumption. An Action Committee consisting of the Deputy Prime Minister and the Premiers of Ontario, Saskatchewan, Alberta and B.C. was formed to investigate ways of increasing the use of Western Canadian coal by Ontario Hydro. An Intergovernmental Secretariat to the Action Committee commissioned numerous studies looking at the feasibility of improving the competitiveness of Western Canadian coal. In 1988-89 the rail section participated in four intergovernmental studies looking at coal transportation costs and attempting to identify areas where these costs could be reduced. The four studies included: Taxes and Regulatory Costs on Rail and Pipeline Traffic, Laker Transportation, Thunder Bay Terminals, and Railway Efficiencies and Impediments in the Carriage of Western Coal to Ontario. The results of the first three studies have been presented to the Intergovernmental Secretariat and the fourth study will be completed in 1989.

General Consultative Services

The rail section continues to provide information and consultative services by responding to new and revised federal legislation and queries from provincial and federal groups, industry and the general public.

Planning Support Branch

The mission of Planning Support Branch is to facilitate the provision and maintenance of an effective and efficient transportation system by:

- the planning and facilitating of programs for northern transportation and special transportation issues.
- the provision of interdepartmental, and intergovernmental liaison and coordination of statutory and regulatory matters affecting the department.
- special studies on transportation policy and planning issues as may be required by the Division.
- the provision of administrative support services for the Division in budgeting control, drafting, library services and clerical services.

The main activities involving Planning Support Branch during the year were:

Northern Transportation

The Wollaston Lake Barge service was studied and analysed to determine appropriate improvements to the level of service being provided to the community of Wollaston Lake. Particular emphasis was given to the procedures used for on-loading and off-loading of freight at the dock sites. Prince Albert District is proceeding with implementation of the recommendations. The existing barge has been determined to be able to meet the demands for the foreseeable future.

A study was conducted on the freight haul for 1988 by barge into Saskatchewan communities on Lake Athabasca. For these communities in 1988 there were 12 390 tons hauled on the system. Stony Rapids generated the largest amount of freight at 4 739 tons. For comparison, the tonnage on the system was 10 939 tons and 6 993 tons in 1987 and 1986 respectively. The increase in freight tonnage for 1988 and 1987 is largely attributable to construction material hauled into the region for the construction of an SPC power line. Freight tonnages are anticipated to decrease significantly in 1989 and future years.

Negotiations and discussions were held with Transport Canada to complete a contribution agreement so that funds from the Coast Guard could be used for transportation projects in the Athabasca region. The preferred utilization of these funds were presented to Transport Canada and accepted. This agreement is expected to be signed early in 1989 with the funds being available shortly thereafter.

Agreement was reached with Transport Canada for continuing the operation of the federal airport at Uranium City. Saskatchewan Highways and Transportation will continue to operate and maintain the airport for Transport Canada. The agreement will expire on August 31, 1991. Continued operation of the airport is essential since a hospital which serves the region is located at Uranium City.

A long range program for upgrading of northern airports was developed. This program includes new airstrips, upgrading of existing airstrips and other improvements including navigational and landing aids. This program is being co-ordinated with Transport Canada programs for improvement of navigational aids in northern Saskatchewan. The present scheduled air service requires good groundside facilities to provide reliable safe transportation into the region.

An interdepartmental committee was established to develop a policy for mine access roads in northern Saskatchewan. The policy will address issues such as mine access road management, cost allocation, and interdepartmental co-ordination. Completion of the policy development is anticipated in 1989.

A seminar was organized and presented to senior staff in the department and other interested agencies. The seminar dealt with current economic and transportation activities in northern Saskatchewan.

Interdepartmental Liaison

As required liaison was maintained with federal and provincial agencies on subjects related to northern transportation and other matters within the purview of the branch.

Co-operation was sustained with the Department of Rural Development in the disposition of abandoned railway rights-of-way to appropriate parties. Many public highways benefited from additional lands available under this program at no cost to the public.

The branch co-ordinated departmental interests in provincial crown lands which have been selected for Treaty Indian land entitlements. This usually relates to public highway rights-of-way and aggregate pits. The selection process is on-going and requires considerable research within the department and transmittal of this to the Saskatchewan Indian and Native Affairs Secretariat.

Federal and provincial airport planning was co-ordinated with Transport Canada. Meetings with departmental and federal officials were held semi-annually. Information was exchanged on current and future program plans for the province.

A study was initiated to identify transportation constraints to tourism in Saskatchewan. This study is expected to provide information on the areas in which constraints exist and recommendations on relieving these constraints. Various provincial departments and agencies that have an interest in this issue are members of the study steering committee. The study is to be completed in 1989.

Contact was also made with various agencies concerning environmental and northern economic development initiations, and land use policy in northern Saskatchewan.

Statutes and Regulations

The branch is responsible for co-ordinating proposed legislation, regulations, orders-in-council and cabinet agenda items.

A new Railway Act was drafted and introduced into the Legislature. This Act should be enacted in 1989.

A comprehensive examination of The Highways and Transportation Act was conducted during the year. A number of required amendments were identifed and enactment of these amendments is anticipated in the future.

Drafting instructions were prepared for a new Engineering Profession Act. Some policy matters remain to be resolved and consequently this legislation has been delayed.

The co-ordination and preparation of documents required for departmental regulations and orders-in-council was conducted as required.

External Activities

Various external activities were conducted during the year. Major activities conducted by branch personnel were the presentation of a paper at the Western Association of Canadian Highway Officials Conference, participating in the federal/provincial committee on transportation for the handicapped. In addition, staff were involved in organizing the WACHO conference that was held in Regina in April 1989.

Technical Research Branch

The mission of the branch is:

- To facilitate and co-ordinate technical research and development activities in support of Saskatchewan Highways and Transportation priorities.

Specific objectives of the branch are:

- To lead and co-ordinate technical research and development directed at improving Saskatchewan's highways and other provincial transportation facilities.
- To make recommendations and/or provide assistance in implementing and developing new equipment, methods, materials or procedures.
- To improve transportation safety to reduce the incidence and severity of accidents.
- To research and support development of Saskatchewan materials and manufactured products for application in the transport sector.
- To develop and utilize the pavement test track for accelerated testing and to provide fundamental knowledge of highway materials behaviour.
- To encourage, monitor and participate in technical research activities involving other agencies and organizations.
- To support technology transfer by disseminating research and development information and providing a forum for technical exchange.

Technical Research Branch implemented a formalized system for conducting research within the department. An Interdivisional Committee to Prioritize Research (ICPR) was created to ensure equity in resource availability, prevention of duplication, monitoring of project progress and the finalization of the research being conducted.

Materials Research

Materials research accomplishments included the completion of four long term research projects, the continuation of data collection for five remaining long term projects, the establishment of five new research projects, assistance with the test track upgrading project and the preparation of several technical reports and documents.

Final reports/bulletins were prepared on the following long term projects:

- the performance of seal coats utilizing high float asphalts;
- the performance of ash from coal-fired power stations as a base course material;
- the performance of a Geotextile Field Test Site installation; and
- a study into changes in subgrade soil moisture and density with time.

Data collection and performance evaluation continued for the six remaining long term projects:

- the performance of variable overlay thicknesses;
- the performance of staged and thin pavements;
- the performance of limed modified soils;
- the performance of thin pavement structures; and
- the measurement of matrix soil suction in the pavement test track facility.

Terms of reference were prepared, and consultants commissioned and monitored for the following new research projects:

- subgrade soil suction measurement in the test track, the construction of an instrumented field pavement test site and comprehensive materials characterization project;
- temperature correction factors for Benkelman Beam deflection measurements;
- the use of the Kriging technique to improve the accuracy of determining quantity and quality of gravel deposits; and
- proposal for the possible use of a bearing capacity approach in the design of highway pavement structures.

A major field test site was constructed on Highway 16 west of the City of Lloydminster to assess the feasibility of utilizing polymer modified asphalt ie: concrete to increase pavement life. Construction has been completed and laboratory testing is in progress.

The branch provided technical specialist advice and services relating to hot asphalt recycling, materials testing procedures and pavement design.

Transportation Research

Transportation research accomplishments included the continuation of three projects, the completion of two projects, the establishment of two new projects and the provision of specialist advice and services.

Data collection and monitoring activities continued on four projects under the "Innovative Traffic Monitoring Technology Program". The projects include the installation of a piezoelectric based weigh-in-motion/vehicle classifier system on Highway #11 just south of Saskatoon, the purchase and initial development of a capacitance mat based weigh-in-motion system and the initial development for a joint industry, federal government and provincial government project for the evaluation of low speed weigh-in-motion prototypes.

Research Branch completed a major study into the accident experience of large trucks in Saskatchewan. The bridge model evaluation study was also finalized.

A major new project was established to demonstrate the application of weigh-in-motion technology at the new Estevan weigh scale. The equipment will be operational by the fall of 1989. A study was also initiated with the University of Regina to assess the accuracy of the information being obtained from the Regina weigh-in-motion installation.

Terms of reference were prepared and consultants commissioned for the following projects.

- joint highway research program with the University of Saskatchewan;
- value of information study (weigh-in-motion data);
- technology package specifications (Estevan scale); and
- accuracy study for the Regina WIM installation with the University of Regina.

Specialist advice and services were provided on matters pertaining to traffic safety, roadway lighting, safety barriers, hydraulics, roadway geometrics.

Test Track

Test Track activity included continuation of the upgrading program, participation in a technology exhange with the University of Canterbury, (New Zealand) and continuing the participation with the University of Saskatchewan in a matrix soil suction experiment.

Electronic prototype development and testing has proceeded well. The electronics have been successfully tested in static loading. Good progress is being made on finalizing the electronic boards for the measurement of subgrade strain for a moving wheel. Initial testing indicated that dynamic signals could be read; present emphasis is on the filtering of the electronic signal and fabrication of printed circuit boards.

The track was also used to determine the effect of repeated wheel loading as part of the matrix soil suction experiment.

Participation in the Strategic Highway Research Program (SHRP)

The department has provided six test sections to the Long Term Pavement Performance (LTPP) program component of SHRP. These sites are located as follows:

- two sites on Highway No. 9 north of Whitewood;
- one site on Highway No. 9 south of Whitewood;
- two sites on Highway No. 11 south of Saskatoon; and
- one site on Highway No. 16 east of Viscount.

All the test sites have been verified and accepted by SHRP, initial distress measurement has been completed, signing is in place and arrangements for the purchase of traffic monitoring equipment underway.

The branch is also actively participating in the asphalts, operations and structures areas of research in the SHRP program by providing valuable information on department procedures to the contracted researchers.

Department Participation in the Canadian Strategic Highway Research Program (C-SHRP)

The branch has been responsible for co-ordinating all activities relating to C-SHRP. The major accomplishments of the branch with relation to the C-SHRP program have been:

- the selection and approval of three test sites for inclusion in the C-LTPP program. The three sites are located as follows:
  - — Highway No. 10, 8 kms south east of Yorkton;
  - — Highway No. 1, 3 kms west of Indian Head; and
  - — Highway No. 5, 2 kms east of Humboldt.
- The department is also participating in several of the studies being undertaken by C-SHRP by way of committee participation, test site provision or information gathering. The department has involvement in the following C-SHRP studies:
  - — the pavement response study;
  - — the bridge deck rehabilitation study;
  - — removal of hazards due to ravelling of granular shoulder material study; and
  - — corrective measures for surface defects study.

New sign showing SHRP pavement research sites

Technology Transfer

The branch initiated a quarterly newsletter to disseminate research information within the department, to other provincial highway agencies as well as to the provinces academic institutions.

The branch also arranged to have presentations given on the results of major research efforts such as:

- organizing technical presentations on the moisture density study, the bearing capacity approach to pavement design proposal and the SHRP and C-SHRP programs;
- the preparation of technical bulletins to summarize and analyse the results obtained from the seal coat test sections and the interim results from the variable thin overlay test sections;
- providing departmental representation to and participating in the Strategic Highway Research Program (SHRP), the Canadian-Strategic Highway Research Program (C-SHRP) and the research projects of the Council on Highway and Transportation Research and Development (CHTRD);
- participating in conferences, technical societies, Roads and Transportation Association of Canada committees and subcommittees of C-SHRP. Branch staff participated in the following:
  - Paper for CTAA conference "A Procedure for the Design of the Bitumen in Hot Recycled Asphalt Concrete";
  - Paper jointly prepared for WACHO, "Evaluation of a Weigh-In-Motion System";
  - participation in the Second International Symposium on Weigh-In-Motion Technology in St. Paul, Minnesota; and
  - participation in the First International Symposium on Instrumentation, in New Hampshire.

Special Activities

The branch hosted a visiting researcher from the University of Canterbury, Christchurch, (New Zealand). The visiting researcher studied the instrumentation being installed at the pavement test track. The reseacher was assessing the soil strain measuring system under development in our track in the hope of installing similar instrumentation in a test track that has been constructed at the University of Canterbury.

Transportation Policy Branch

The mission of the branch is threefold:

- to formulate transportation policies for the purpose of developing improved transportation systems and services in support of the economic and social development of Saskatchewan.
- to provide information and expertise regarding extra-provincial legislation and regulations and intergovernmental transportation relations.
- to consult with and provide information and assistance to other government departments and agencies, to Saskatchewan communities and to transportation users and carriers.

During the 1987-88 fiscal year the branch maintained liaison with federal and the other provincial and private sector agencies dealing with transportation. The branch was involved in several major activities discussed below.

Air

The branch is responsible for influencing and improving the level and quality of commercial aviation services and infrastructure affecting Saskatchewan.

During 1988-89 branch staff were involved in the following major activities:

- Reviewed proposals and participated in discussions with National Transportation Agency officials concerning monitoring objectives covering the impact on air transportation of the New National Transportation Act and the requirement of a major five-year review.
- Reviewed methods to facilitate the monitoring of Saskatchewan's air transportation services relative to C-18 and airline deregulation including access to sophisticated computer data base systems.
- Continued to review the implementation of the federal government's new airport policy and impact on Transport Canada airports in Saskatchewan. This included creation of Saskatoon Airport Economic Development Board and a new Regina Airport Community Consultative Committee.
- Continued to monitor and assess commercial air carrier activities affecting Saskatchewan and where necessary developed specific departmental and government strategies, including:
  - worked extensively with the Saskatchewan Outfitter Association and the Saskatchewan Department of Economic Development and Tourism concerning Transborder and Northern Air services. These initiatives were successful both in improving relations with Air Carriers including the initiation of a number of new programs specifically in response to the Saskatchewan Outfitters' concerns.
  - participated in a jointly sponsored study with the government of Alberta, Time Air and the City of Lloydminster on an Air Demand Survey, in an effort to establish improved services and better access to Saskatchewan from Lloydminster.
- Continued to monitor and assess all Notices, Decisions and Orders of the National Transportation Agency respecting commercial air carrier activity in Saskatchewan.
- Continued to participate in the development of Transport Canada infrastructure in Saskatchewan through regular involvement in Saskatchewan air facility meetings. The department was also represented on the Saskatoon and Regina Airport Consultative Committee.
- Co-operated with and encouraged the creation of an independent Saskatchewan Aviation Council intended to provide a coordinating community approach in addressing air transportation issues and concerns.

- Co-ordinated a review of Consumer and Corporate Affairs action against the merger of Reservac and Pegasus reservation systems for air services.
- The department continued to be represented on the Roads and Transportation Association of Canada, Aviation Technical Committee and is an associate member of Air Transport Association of Canada including representation on a number of committees.

Physical Distribution and Transportation Advisory Program

This program provides a center of expertise and up to date information regarding goods distribution into, within and out of Saskatchewan. The objective is to reduce costs to Saskatchewan shippers, receivers and carriers. The goals of the program are to assist Saskatchewan business in maximizing their efficiency and profitability and to enhance the development of new domestic, export and import markets through utilization of physical distribution management techniques.

During 1988-89 branch staff were involved in the following major physical distribution activities:

- On-going development, monitoring and networking with other government and private sector people to support our center of expertise, information and human resource base on physical distribution management in Saskatchewan.
- A priority of the program is to identify deficiencies in the present physical distribution and transportation methodologies at user levels, then assisting and advising of alternatives that overcome the deficiencies.
- Maintained active memberships in national and international associations.
  - — Member, Chartered Institute of Transport — Prairie and N.W.T. Section — Secretary/Treasurer;
  - — Electronic Data Interchange Council of Canada;
  - — Canadian Association of Logistics Management, Regional Director, Saskatchewan and Manitoba;
  - — Canadian International Freight Forwarders Association; and
  - — International Cargo Handling Co-ordinating Association.
- Provided consulting services to other departments, shippers, receivers and carriers on physical distribution matters.
- Promoted the establishment of a Shipper/Carrier Council to discuss issues of common concern and alleviate problems.
- Distributed 200 Physical Distribution and Transportation Advisory manuals.
- Requested by private sector and the Canadian Industrial Transportation League (C.I.T.L.) to co-ordinate eight civic and provincial government department's involvement in the first C.I.T.L. general meeting and Transpo Exposition held in Saskatchewan in 72 years.
- Facilitated the development of a proposal from a private group, Container Port of Saskatchewan Corporation, to the federal Western Diversification Office and Saskatchewan Economic Development Corporation to assist in financing an Inland Container Terminal facility.
- Resource person/speaker at meetings, conferences and workshops to promote physical distribution management.
- Developed a brochure describing the physical distribution program.

Rail

The branch is responsible for influencing and improving the level and quality of rail service and infrastructure affecting Saskatchewan.

During 1988-89 branch staff were involved in the following major activities:

- continued to monitor and assess all Notices, Decisions and Orders of the National Transportation Agency respecting rail activities in Saskatchewan.
- held discussions with officials of the western provinces and the National Transportation Agency concerning surveys to monitor the performance of the new National Transportation Act.
- completed a study to determine the issues, information requirements, alternative strategies and an action plan concerning monitoring of the new National Transportation Act.
- discussed with the eastern provinces, the National Transportation Agency and Transport Canada, the rail rationalization proposal jointly developed by the four western provinces.
- completed a study to determine the effects of variable grain rail rates on the delivery patterns of Saskatchewan grain producers.
- prepared submissions to the National Transportation Agency concerning the reconsideration of rail line abandonment applications.
- the following tables provide information on the current status of Saskatchewan branch lines.

Rail Line Abandonment Applications Currently Active under Section 160 of the National Transportation Act, 1987

Railway/ Subdivision	Between Points	Track Miles	Status
CP Altawan	Notukeu to Manyberries (M. 65.7) (M. 122.1)	56.4	Under reconsideration
CN Central Butte	Moose Jaw Jct to Mawer (M. 39.37) (M. 85.00)	45.63	To be reconsidered by 1990
CN Chelan	Reserve to Weekes (M. 0.00) (M. 12.87)	12.87	Under reconsideration
CN Corning	Peebles to Corning (M. 0.00) (M. 15.00)	15.00	To be reconsidered by 1989
CN Erwood	Baden to Hudson Bay (M. 50.85) (M. 100.00)	49.15	Under reconsideration
CP Kisbey	Griffin to Weyburn (M. 43.60) (M. 60.90)	17.30	Under reconsideration
CP Neudorf	Rocanville to Esterhazy (M. 53.50) (M. 82.00)	28.50	Under reconsideration
CN Porter	Oban Junction to Cando (M. 0.00) (M. 18.00)	18.00	To be reconsidered by 1989
CN Preeceville	Preeceville to Kelvington (M. 72.73) (M. 113.58)	40.85	To be reconsidered by 1990
	CN Total Miles	**181.50**	
	CP Total Miles	**102.20**	

C.T.C. Abandonment Orders Issued Under the Railway Act, Abandonment Date Not Yet Effective

Railway/ Subdivision	Between Points	Track Miles	Status
CN Acadia Valley	Eyre Jct to Acadia Valley (M. 0.00) (M.23.67)	23.67	Ordered abandoned July 1/1989 contingent upon the establishment of an alternative grain handling service.
CN Avonlea	Parry to Avonlea (M. 29.1) (M.51.45)	21.64	Ordered abandoned November 28, 1989
CP Colony	Rockglen to Killdeer (M. 0.00) (M. 24.60)	24.60	Ordered abandoned to the earlier of 30 days after closure of Saskatchewan Wheat Pool elevator at Killdeer on August 31, 1989
	CN Total Miles	**45.31**	
	CP Total Miles	**24.60**	

Rail Line Abandonment Between April 1, 1988 and March 31, 1989

Railway/ Subdivision	Between Points	Track Miles	Status
CN Cudworth	Hoey to St. Louis (M. 84.5) (M. 86.4)	1.9	Ordered abandoned July 6, 1988

Capital Program Planning Branch

The mission of the branch is:

- to identify and assess present and future demands for provincial highways, provincial and municipal airports, urban transportation assistance and rural transit assistance in Saskatchewan.
- to develop, monitor and evaluate strategic and short-range responses to these demands in terms of capital programs.

Major Activities

Capital Programming

The proposed five-year construction program was reviewed and developed for the period 1989 to 1993. The recommended 1989-90 capital program and budget were compiled. This activity was particularly prolonged and time consuming as the Treasury Board Division of the Department of Finance utilized a different budgeting approach. It required the compilation and submission of numerous budget levels and scenarios including a two year capital budget proposal.

After the numerous submissions and reviews of different scenarios, the 1989-90 capital budget for the department was approved at $121.34 million representing a $10 million increase over the 1988-89 capital budget.

Development of the capital program and budget involves a great deal of background work, consultation and analyses. These activities involved, as in previous years, extensive liaison with Operations Division and its three branches and six districts, and with most branches of Engineering Division.

The Road Information Program of Canada (TRIP/Canada) Update Submission

An update study on the reconstruction and resurfacing needs on Saskatchewan's provincial highways was completed in response to a request by TRIP/Canada. The study included a comparison of the accomplishments over the last five years to the previously identified needs as well as outlining the reconstruction and resufacing needs for the next five years. TRIP/Canada's report was made public in December 1988.

The Federal-Provincial Yellowhead Highway Improvement Program

Together with Operations Services Branch, the branch was involved in updating and amending the Canada-Saskatchewan Yellowhead Highway Improvement Program. The agreement signed in June 1987 provides for $22 million, cost shared 50-50, over the three-year period 1987-88 to 1989-90. The changes made to the agreement involved the addition of a number of resurfacing projects which will ensure that expenditures are completed within the time limits of the agreement.

Pavement Management Information System (PMIS)

The pavement management information system being developed by the department will evaluate reconstruction as well as rehabilitation strategies for the highway system. This branch is co-chairing the steering committee with Surfacing Branch and is actively involved on the working committee. Areas of PMIS in which the branch is most actively involved are reconstruction program simulation and road user costs.

During 1988-89 the design and modelling process was completed. Testing, debugging, refining and training will commence in 1989-90.

Programming and Planning Studies

Work continued on the review of the Pavement C policy through an inter-branch committee. The final report and recommendations have been submitted to senior management for review.

The branch participated in a review of access roads to resort villages together with the Departments of Rural Development and Parks, Recreation and Culture.

A study to determine the need for truck rest stops on major highways was initiated. Completion is scheduled for late 1989.

Work began on a review of the department's Illumination Policy through a divisional committee.

Urban Transportation Planning

Professional engineering input was provided on a wide range of urban transportation issues confronting the department. Technical assistance was provided on the Marquis Drive/Highway 11 study in Saskatoon, the Highway 16 — 45th Avenue to 50th Avenue Functional Study in Lloydminster and the Regina Transportation Study.

Grid Road Takeover Policy

Since May 1, 1984 the department has implemented a Grid Road Takeover Policy which stipulates minimum criteria that must be met before a rural municipal road would be considered by the department for inclusion into the provincial highway system.

During 1988-89, seventeen grid road takeover requests were evaluated with respect to the policy. Two grid roads for a total of 66.9 kilometres were brought into the highway network.

Inventories and Statistics

The following inventories for which the branch is responsible were updated: highway inventory, inventory for primary and secondary community airports and highway-railway grade crossing inventory.

The branch also compiled the annual lengths and expenditure statistics for Statistics Canada and the Roads and Transportation Association of Canada and responded to information requests from the Canadian Automobile Association and the Saskatchewan Trucking Association.

Professional Publications

The branch staff were involved in the following publications during 1987-88.

1. Hassan, M.U., Crook, T.L. and Butz, R.D. "A Case Study of the Evaluation of a Highway Capital Program and Budget Control System", Proceedings of the Roads and Transportation Association of Canada Conference, Halifax, Nova Scotia, September 1988.
2. Hassan, M.U., Day, D.S., Harreman, F.R. and Lott, S.V. "Airport Planning in Saskatchewan", Proceedings of the Roads and Transportation Association of Canada Conference, Halifax, Nova Scotia, September 1988.

Technical and Specialist Services

A proportion of staff resources was utilized to provide specialist advice and assistance to senior management, other units of the department and extra-department units on matters related to highway planning, location and design standards, airport planning and classification, urban transportation planning, and policies related to capital programs.

Examples of such activities include the preparation of briefs, letters and background papers pertaining to the Saskatchewan Association of Rural Municipalities, Saskatchewan Urban Municipalities Association, Yellowhead Highway Association, Saskatchewan Roadbuilders, urban and rural municipalities, members of the public, and federal and provincial governments.

Regulation and Traffic Safety Division

Sherwin Petersen
Minister
Highways and Transportation

J. R. Sutherland
Deputy Minister

Bill McLaren
Executive Director

Dave Stewart
Transportation
Legislation and
Safety Branch

Phyllis Glowatsky
Board Affairs
and Support
Services Branch

Ron Blackburn
Motor Carrier
Regulation
Branch

Barry Weafer
Transport
Compliance Branch

The mandate of the division is to promote the safe and economic operation of commercial and private vehicles within the province. This mandate is met within four branches which were established this year. Retirements and vacancies which occurred in previous years made this reorganization timely.

The division performs support functions for the Highway Traffic Board by developing policy options for possible implementation, administering the daily functioning of the Board, and by requesting or implementing Board decisions.

The division is also responsible for the development, implementation and delivery of enforcement, safety and transport regulation initiatives for the department.

Application for extra-provincial and non-general merchandise intra-provincial authority continue to be processed in accordance with the reverse onus criteria. Applicants and all existing authority holders continue to be reviewed for the issuance of safety ratings under the National Safety Code.

Additional standards continue to be developed and legislative amendments were prepared for consideration of the Legislature. These amendments are required to allow for implementation of regulations.

Legislation was also enacted to control all terrain vehicles and a program was introduced to systematically inspect vehicles on the highway for compliance with provincial laws.

1988-89 ended with the relocation of head office staff to 1855 Victoria Avenue. This move ended a nine and one-half year tenancy in the SGI building.

W. R. McLaren
Executive Director
Regulation and Traffic Safety
Division

Board Affairs and Support Services Branch

The Board Affairs and Support Services Branch has the responsibility for providing administrative support and services for the Regulation and Traffic Safety Division as well as the Board Secretariat functions for the Highway Traffic Board.

The administrative support for the staff of the division involves procurement of equipment, uniforms and supplies, invoicing, processing printing requisitions, controlling inventory, processing expense statements for members of the Board, monitoring budgetary allocations for the division and co-ordinating personnel related matters with the Human Resource Branch.

The Board Secretariat function for the Highway Traffic Board involves the planning, organizing, co-ordinating and managing of activities for the Board members, such as:

- preparing agendas, files, policy proposals and other related material.
- planning, arranging and scheduling appeals on driver suspensions or S.G.I. related decisions, public hearings relating to operating authority applications and meetings to obtain public input or provide information.
- providing technical and professional advice and consultative services to solicitors, shippers, carriers and others respecting matters dealt with by the Board.
- preparing, distributing and implementing in a legally correct manner, all Board decisions, orders or directives.

In 1988, the branch provided the support services for 24 regular Board meetings as well as scheduling two meetings with the Saskatchewan Bus Industry, three information meetings to provide carriers information on regulatory matters, two seminars relating to the National Safety Code and three Liaison Committee meetings with the Saskatchewan Trucking Association. In addition, 15 public hearings for operating authority applications, eight hearings on applications for discontinuance of bus services and 180 hearings for restricted driver's licences were set up. The Driver Appeal Unit also handled approximately 2,500 inquiries relating to driver's licence issues.

Motor Carrier Regulation Branch

The Saskatchewan Motor Carrier industry is subject to regulations designed to enhance freight and passenger services to Saskatchewan residents. The main program areas include:

Operating Authorities Section

Operating authority administration involves processing motor carrier applications for new authorities, monitoring carriers for fitness, and instituting disciplinary action. As well, a consumer relations function provides information services regarding the responsibilities and services provided by for-hire carriers.

While the ease of entry process was introduced in 1986, the Board continues to receive a substantial number of applications: (1987/88 — 299 and 1988/89 — 277). As well, all extra-provincial applications and non-general merchandise intra-provincial applications continue to be processed under reverse onus criteria.

The following statistical table shows the level of operations within the Section:

Type	1987/88	1988/89
Ease of Entry	299	277
Reverse Onus	239	371
Public Convenience and Necessity	121	41
Total	659	689

Motor Carrier Fitness Section

One of the policies of the Highway Traffic Board is to promote compliance with all transport laws and regulations by those involved in the motor carrier industry.

A central registry of all transport law violations, along with a recording of the violators is maintained, and continuously reviewed. In accordance with predetermined levels, registration and/or authority holders are subject to action in the form of warning letters and counselling sessions.

During the past year, letters were forwarded to 25 carriers providing a brief description of the Compliance Review Program and procedures. The letter also requested that the carrier provide us with operational data to ensure our records were correct.

Carriers making new applications for authority had their records under the Compliance Review Program reviewed. No carrier was asked to meet with the Board or the Compliance Review Committee as a result of its compliance with transport law. This encouraging trend is a reflection of carriers' wishes to enhance their opportunities in Saskatchewan as well as throughout Canada in light of National Safety Code requirements.

Central Permit Office Section

A Central Permit Operation has continued to service the motor carrier industry on a round-the-clock basis. Permit authorizations for operating authorities, fuel tax, vehicle registrations, and weight and dimension authorities are provided.

The Central Permit Office is preparing to start up a new (APS) Automated Permit System in the next fiscal year; this system will be a joint venture between the C.P.O. and Maintenance Branch.

The Central Permit Office unit commenced operation in 1983 and has since issued 312,735 permits generating $16,142,401 revenue.

Year	Number of Permits	Permit Revenue
1983	42,617	$ 1,946,298
1984	55,162	2,420,341
1985	54,956	2,679,605
1986	51,141	2,572,190
1987	55,966	3,019,209
1988	52,893	3,504,758
Total	312,735	$16,142,401

Transportation Legislation and Safety Branch

The mission of this branch is to develop and co-ordinate provincially, and influence nationally, motor carrier policy, taxation and legislation. 1988-89 was the initial year of the Transportation Legislation and Safety Branch. Effective April 1, 1988, the branch was divided into four sections.

Safety and Legislation Section

In June 1988, the Legislative Assembly enacted The All Terrain Vehicles Act. The section worked on the development of regulations under the ATV Act respecting helmets and eye protection for operators of ATVs.

During the fiscal year, the section initiated a request that Cabinet consider the Province's participation in the National Safety Code (NSC). Late in the fiscal year, Saskatchewan's representatives signed a five year agreement with the federal government for implementation of the NSC standards.

The section continued to co-ordinate legislative and regulatory developments for the division.

Program Development and Support Section

This section was established April 1, 1988. Its responsibilities are:

- Develop and evaluate programs, and provide research and analytical support to other units and to the Board;
- Provide advice, research, design and program computer systems. Recommend appropriate hardware and software and maintain division-owned systems;
- Prescribe and evaluate filed rates for freight and passengers, develop conditions of carriage and set insurance requirements.

The major activities were as follows:

1. Program Development and Evaluation

   Completed an evaluation of carriers' and shippers' perception of the Draft Federal Hours of Service Regulations. The major finding was that a ten hour limit per day as driving time would create serious problem for carriers operating into northern Saskatchewan and for carriers hauling seasonal commodities, for example, fertilizer and petroleum.

   Assisted in the development of a Request for Proposal (RFP) for monitoring the regulatory impact of the MVTA and NTA on trucking industry. RFP was subsequently adopted by CCMTA and released. Resulted in hiring of a consultant for a study design. The report of the consultant was reviewed and recommendations based on that report were developed for consideration by the Compliance and Regulatory Affairs Committee of CCMTA. Implementation of recommendations expected in autumn 1989.

   Developed and implemented policy for rural bus subsidies.

   Developed policy for permanent and temporary alteration of service by passenger and freight carriers.

   Initiated development of policy regarding bill of lading for carriers who are implementing Electronic Data Interchange (EDI) in their operations.

2. Systems Development and Support

   Created a data base for Operating Authority Holders for Board Affairs and Support Services Branch.

   Completed design of Motor Carrier Offence List (MCOL) and initiated transfer of MCOL from mainframe to micro-computer.

   Completed design of Objectives Monitoring System (OMS).

3. Rates and Conditions of Carriage

   Recommended a 2.52 per cent increase for intra-provincial general merchandise rates effective August 1, 1988 based on the in-house expense model and Statistics Canada indices.

   Reviewed filed rates for bus and express service using a bus expense index.

Vehicle Registrations and Permits Section

The vehicle registration unit is responsible for meeting the needs of approximately 820,000 vehicles requiring registration in Saskatchewan. This includes establishing and monitoring the allowed uses and associated fees of various registration classifications. In addition, this unit is responsible for developing and maintaining reciprocity agreements, national registration standards and registration delivery systems through Saskatchewan Government Insurance.

Number of Vehicles

Description	Registered
Public Service	2,394
Public Service — — Rural General Merchandise	212
Commercial Vehicle C	16,507
Commercial Vehicle D	29,981
Farm Truck	162,748
Private Vehicle	498,853
Private Trailer	78,642
Commercial Trailer	12,962
Passenger PSV Bus	202
Passenger City Bus	419
Passenger School Bus	3,339
Taxi	623
Mobile Toboggan	6,531
Licensed Auto Dealer	3,565
Licensed Trailer Dealer	85
Federal Government	1,972
Total	819,035

The Single Application for Vehicle Registration program was implemented on July 1, 1988. This program is a registration application system delivered by SGI which allows a Saskatchewan based carrier to satisfy all Canadian registration requirements through one office.

Dangerous Goods Transportation Section

The unit continues to liaise with the transportation industry and provide assistance through inquiries to comply with the regulations.

In conjunction with the Saskatchewan Trucking Association, the unit assisted with the development and presentation of a 'dangerous goods transportation instructors' course'. This course is aimed at safety personnel who in turn teach handlers and drivers how to comply with the regulations. This course has proven very beneficial and we will continue to provide our assistance as long as there is a need identified by the transportation industry.

The unit has processed amendments to the regulations that have been initiated by Transport Canada. Saskatchewan concerns and bearing in mind the objective for 'public safety' while maintaining national uniformity have been our primary concern. These amendments, in part, have increased the flash point for regulated flammable liquids to 61°C, provided an expanded definition for waste products, recyclable materials and an improved notification system for waste shipments.

The unit has continued to participate in 'public awareness' events to ensure that the public and industry are provided the opportunity to learn about the dangerous goods transportation program. Enforcement agencies, emergency responders and other government departments have continued to consult with this unit and on-going assistance has been provided.

Transport Compliance Branch

This branch is composed of Saskatchewan Highway Transport Patrol and Transport Investigation Units who police and serve the road transportation industry.

The mandate of this law enforcement group is to promote compliance with rules which protect highways and the people who use them and to govern the movement of vehicles, goods and passengers. Primarily, officers interface with the bus/truck industry, but they have the authority to promote highway safety for all vehicles by taking action on flagrant violations when encountered.

For organizational purposes, the province is divided into two regions. Uniformed staff are employed to patrol the highways and to staff 14 permanent weigh scales. These activities are conducted around the clock. Investigative staff operate from the major centres. They conduct investigations into road transportation complaints and conduct audits on individual carriers.

The primary consideration of both is the enforcement of laws and regulations covering weight and dimensions, economic regulation (operating authority and registration) plus vehicle and driver safety. While carrying out their duties, staff conducted 1,117 investigations, 248,334 inspections and 20,185 consultations with industry during the year.

This branch has been promoting compliance with Dangerous Goods Transportation laws on Saskatchewan highways. All officers are trained and certified as Dangerous Goods Inspectors for Saskatchewan. Their duties include inspection of drivers, vehicles, cargo, documentation and the display of safety marks.

1988 saw the introduction of the Commercial Vehicle Safety Alliance Inspection Program in Saskatchewan. This international organization is devoted to promoting safer vehicles on all North American highways through roadside inspections. Vehicles which pass inspection are awarded decals which are recognized by other jurisdictions. The decals exempt the vehicle from major inspections for three months. Unsafe vehicles are placed "out-of-service" until necessary repairs are made.

During 1988, construction of a new highway weigh scale at Estevan was started. The facility will use some of the newest technology available from automatic vehicle classifiers to weigh in motion scales. Work continued through the winter months and the new facility is expected to open in the late Spring of 1989.

Of the charges and written warnings issued, approximately 55 per cent went to carriers and drivers based outside the province. This reflects the high level of trucking into and through Saskatchewan from other states and provinces.

Recap of Charges and Written Warnings 1988/89

Economic Regulation	**1988/89**
Operating Authority	507
Registration	2,351
Sub-Total	2,858
Weight and Dimension	
Overweight	2,146
Overwidth	428
Overlength	93
Overheight	89
Other	302
Sub-Total	3,058
Vehicle and Driver Safety	
Dangerous Goods	198
Vehicle Offences	3,714
Driver Offences	2,570
Miscellaneous	396
Sub-Total	6,878
Total	12,794

Summary of Violation Rates 1988/89

Type of Inspections	**Location of Inspections**	**Number of Inspections**	**Violation Rate**
Economic Regulation	At Weigh Scales	27,627	5.3
	On Patrol	11,917	8.6
Weight and Dimension	At Weigh Scales	163,538	1.2
	On Patrol	10,411	10.1
Safety	At Weigh Scales	17,833	13.8
	On Patrol	17,008	24.3
Total weigh scale inspections			208,998
Total patrol inspections			39,336
Total inspections			248,334

Support Services Division

The mission of the Support Services Division is to provide and support quality administrative management and specialized services to the department in an effective and responsive manner and to be sensitive, proactive, and innovative in meeting the needs of the people we serve.

Services that are provided include:

- staffing
- personnel management and training
- financial management and control
- management and administrative systems
- computer services
- property acquisition
- property management

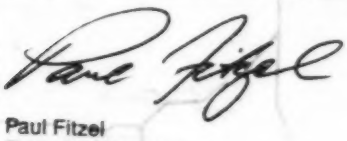
Organizationally, the division is structured on a functional basis with each of four branches; Human Resource, Management Services, Financial Services and Property Services providing the department with a specialized service.

Two events had a significant impact on the division in 1987.

Although staff shortages resulting from the early retirement program in June of 1987 still hampered some branch operations, the staff in all branches performed admirably and with dedication and are commended for their efforts.

This year has seen a large increase in the utilization of personal computers throughout the department. Management Services Branch staff were kept very busy in providing installation of terminals, training, and other support.

Details of specific services and accomplishments are provided in the following individual branch reports.



Paul Fitzel
Executive Director
Support Services Division

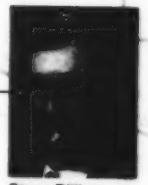
Sherwin Petersen
Minister
Highways and Transportation

J. R. Sutherland
Deputy Minister

Paul Fitzel
Executive Director

Art Lowey
Property Services Branch

Dennis Demeny
Management Services Branch



Steve Pillipow
Human Resource Branch

Colleen Laing
Financial Services Branch

Human Resource Branch

The mission of Human Resource Branch is:

- to provide assistance and guidance in areas of management of human resources, employee benefits, industrial safety, industrial relations, staffing, classification, staff training and development;
- to identify training needs and to develop and deliver programs to meet those needs;
- to conduct manpower planning activities to ensure that the department will continue to have employees with the necessary skills to carry out its programs in an effective and efficient manner.

Major activities of the branch included:

- co-ordinating and facilitating compliance with the new Occupational Health and Safety legislation for hazardous materials.
- a high level of staffing activity to fill positions vacated as a result of the early retirement program in 1987;
- due to the large number of new supervisors, the department's supervisory training program was accelerated to ensure an adequate number of qualified supervisors were in place for road maintenance operations;
- providing guidance and assistance to department managers in areas of the management of human resources, employee benefits, industrial safety, industrial relations, staffing, classification, staff training and development.

Labour Relations

Problem solving meetings were held with the Union on an on-going basis to resolve problems before they become formal grievances.

During the year 11 grievances were received, seven of which have been resolved and the remaining four are in various stages of the grievance process. In addition 15 grievances that were received in previous years were resolved during the year.

Staffing and Reclassification

Competitions were held to fill the following number of positions:

Public Service — 145
Labour Service — 201

There were 59 employees who requested a review of their jobs to determine if they were properly classified.

Training and Development

The department maintained its emphasis on performance improvement through several training and development opportunities during the year.

A total of 4,655 training spaces on numerous courses and seminars were used by department employees which resulted in 6,674 person days of training.

The department training programs included:

- Management and Supervisory Training
- Technical Training
- Support Staff Training
- Equipment and Trades Training
- Safety Training

The above mentioned programs provided developmental opportunities through the following agencies:

Source	Course Spaces Used	Person Days
Department Sponsored Courses	3,984	5,338
External Conferences	156	455
External Seminars	214	389
PSC Seminars	255	492

Safety Section

A major objective of the department is to provide a safe working environment for all employees. The promotion of safety and training in the interest of injury and loss prevention, both on and off the job, forms an intergal part of the Industrial Safety Program.

A total of 711 employees participated in work site safety meetings conducted by Safety staff members

Throughout the year 173 regular public safety and work place inspections were carried out in order to reduce the possibility of injuries to the general public and department staff at those sites.

Safety section staff provided on-site consultation on 12 occasions to local and regional Occupational Health committees in various locations around the province.

Industrial hygiene projects were prevalent particularly dealing with respirable silica in sweeping operations, and in a sick building syndrome investigation.

Management Services Branch

Management Services Branch is responsible to provide, assist in and promote the analysis, development, implementation, operation and maintenance of effective and efficient Management Information Systems for the department. Some of the major activities are:

- developing and implementing Management Information Systems to meet the needs of the department
- providing data processing services
- training user branches and districts in the operation of data processing equipment, related procedures and applications development
- actively monitoring systems so that program managers at all levels have information available to review quantity, quality, time and cost status for each of their programs
- co-ordinating and conducting organizational reviews of the department units
- providing liaison with other departments and agencies of government in the carrying out of assigned duties.

The branch is continually involved in developing methods and procedures to assist managers in making better management decisions. Emphasis is placed on tasks having a high economic return on investment and improved productivity.

Major Activities

Phase II of the department's Electronic Technology Strategy was implemented in the district offices.

Seven local area networks were installed in the districts to extend the information processing capabilities beyond head office.

Capabilities include:

- word processing, electronic messaging within and between networks, data entry access to Westbridge, remote job entry, spreadsheet and graphics

A pilot demonstration project of a microcomputer based Geographic Information System was undertaken. Data selected from several systems were loaded, and tested for a geographic area covering central Saskatchewan.

A Corporate Strategic Systems Plan was written to guide future systems development and acquisition.

Approximately 100 microcomputers were connnected to the district and head office local area networks.

Computer aided design stations and software were installed in two districts and head office.

Building renovations to London Life building were completed, and the Regulations and Traffic Safety Division was relocated from the SGI building.

The Automated Permit System programming and testing were completed.

A microcomputer training program was initiated, and all districts given the introductory training prior to installation of their local area networks.

The Support Services Service Guide was written and circulated.

A departmental Microcomputer Policy was written.

Property Services Branch

Property Services Branch is responsible for:

- the appraisal and negotiation of land for various department programs
- establishment of standard rates of compensation for land related damages negotiated by the branch and other department units
- arranging for the legal survey services required for department right of way and public improvement projects
- the registration of rights to property to meet the department's construction schedule and the Grid and Main Farm Access Road Program
- payment for various related services and for land where title has been secured
- the management of property rights under the jurisdiction of the department pertaining to public highways and public improvements.

Property Acquisition

- A total of 620 land purchase agreements and related contracts were successfully negotiated on 41 highway projects. The major right of way project was the new Highway No. 41 from Highway No. 6 to east of Highway No. 368 and from Highway No. 41 to Highway No. 3. A total of 339 properties were appraised, negotiated and acquired by a property acquisition staff of four at a negotiation success rate of 98.2 per cent.
- Some 50 requests to subdivide land adjacent to Provincial Highways were reviewed and comments were provided on the method of conveying required right of way to the Province. In 16 of the subdivision requests there was direct involvement by property acquisition staff to appraise and negotiate for land by purchase agreement or dedication agreement.
- Two old arbitration cases were settled out of court and three claims for arbitration were filed with respect to right of way expropriated under The Expropriation Procedure Act.
- An update and rewrite of the Property Acquisition Manual was commenced and two chapters were completed.

Property Registration

- The registration of plans of survey and legal documents and the procurement of legal survey services were completed on time to meet construction schedules for the provincial highway grading program.
- The conveyance of roadway lands in the Province that are affected by the following programs are handled by this section:

  Rail Line Abandonment

  Indian Land Entitlement

  Northern Community Land Transfer

Property Management

- Over 1,400 requests for consents and permits were granted in department property, a decrease of 10 per cent from the previous year.
- The program of microfilming non current branch files was continued.
- Completed the verification of plan information placed on a new electronic survey plan index system.
- Developed a branch service guide that formed part of the Support Services Division Service Guide Manual.
- Improvements were implemented in the information storage, retrieval, document preparation and financial monitoring of lands under permit and lease.

1988-89 Accomplishments

Plans of survey recorded (all types)	1,225
Road, Public Improvement and reference plans processed	592
Road, Public Improvement and reference plans registered	480
Provincial Highway, Public Improvement and miscellaneous surveys contracted	49
Kilometres of Provincial Highway contracted	158
Consents and permits issued	1,404
Closures, abandonments and encroachments issued	269
Property agreements paid	483
Property agreements negotiated	620
Leases, grazing and cultivation permits issued	148

Financial Services Branch

The Financial Services Branch provides centralized financial services and financial management information to, and on behalf of, department managers.

The branch is organized functionally into the financial management, accounting, and administrative support sections.

Financial Management

The major responsibilities of this section are inventory management, including the purchasing function, fixed asset control, financial systems review, budget and fiscal forecast preparation.

During the year, a study was conducted to enhance the management information provided in the fuel consumption reports. All Districts were consulted and recommendations for changes have been completed. Implementation of the recommended changes is dependent upon the results of the study of the Equipment Management Information System.

The inventory management sub committee finalized and implemented a policy for recording used signs to ensure that they are accurately accounted for in the system. The policy will be monitored and assessed after it has been in place for a year.

Accounting

The accounting section processes payments, payrolls and receipts, maintains financial records and produces financial and statistical reports.

The section prepares the Revolving Fund financial statements and the department's reports for public accounts.

The payroll unit of the branch produced in excess of 22,500 labour service cheques and direct deposit advices during the year, while processing the payroll for all salaried public service employees in the department.

A micro computer program was designed and implemented during the year to facilitate the reconciliation of the Revolving Fund General Ledger to the Revenue and Expenditure System. This program has simplified the reconciliation process enabling staff to complete the reconciliation more accurately and on a more timely basis.

A committee of departmental employees prepared a new section documenting the Expenditure Distribution System for insertion into the Financial Administration Manual.

A quality circle was formed in the accounts payable unit to recommend alternatives for improving the physical working environment of the unit.

Administrative Support

The administrative support section provides data entry, secretarial, co-ordination and mail services to the branch, and in some cases, to the department as a whole.

During 1988, a staff development planning and tracking report was programmed on the micro computer enabling the branch to track staff enrollment and attendance at all courses and obtain feedback from each employee as to the effectiveness of the course.

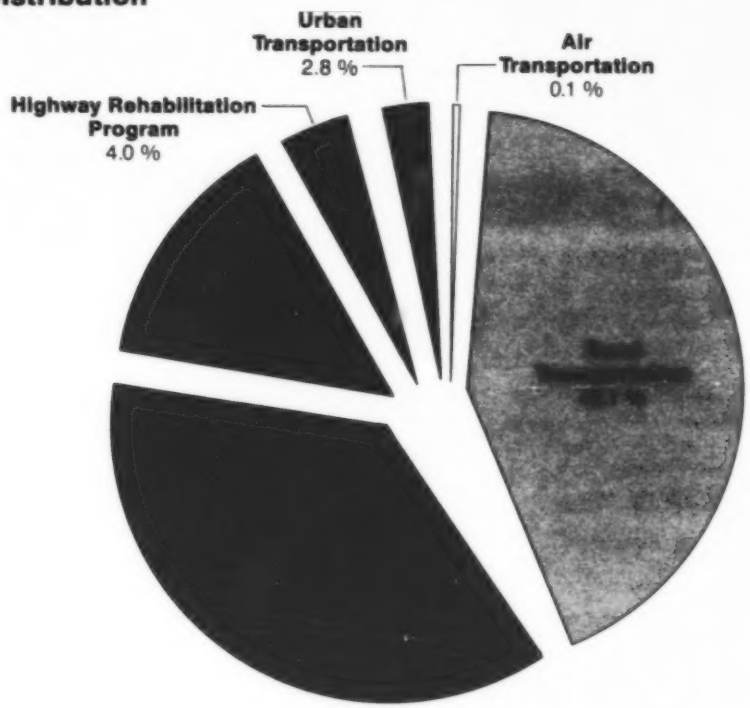
In addition, the section co-ordinates the preparation of schedules and responses respecting the department's annual appearance before committee of finance and, if called, public accounts.

Appropriation and Expenditure 1988-89

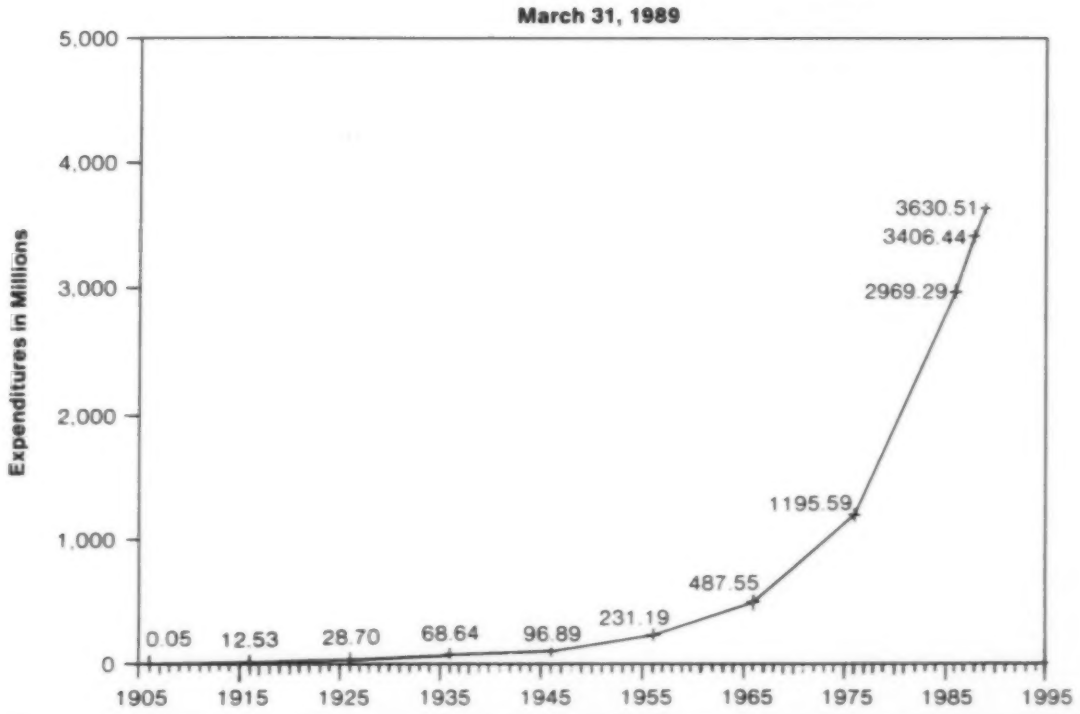
Ordinary	Appropriation	Expenditure
Executive Administration	$ 939,000	$ 982,004
Financial Services Branch	687,700	673,627
Human Resources Branch	870,100	854,350
Transportation Planning and Research Division	3,009,200	2,569,168
Property Services Branch	667,700	625,613
Communications Branch	723,800	556,344
Operations Services Branch	1,059,300	1,086,889
Engineering Division	2,476,800	2,530,618
Bridge Branch	359,200	350,283
Swift Current District	1,201,200	1,203,244
Regina District	1,699,000	1,665,063
Yorkton District	1,077,900	1,095,360
Saskatoon District	1,125,500	1,096,076
Prince Albert District	1,616,300	1,594,822
North Battleford District	1,384,400	1,380,639
Management Services Branch	1,093,000	1,136,757
Grants	138,800	137,755
Regulation and Traffic Safety Division	3,495,900	3,478,959
Payments to Sask Property Management Corporation	9,055,000	8,524,861
Members of Executive Council (Statutory)	28,300	37,071
	$ 32,708,100	$ 31,579,503
Maintenance	87,477,700	82,653,004
Subtotal	$120,185,800	$114,232,507
Capital		
Rural Surface Transportation	$ 95,240,000	$ 94,360,647
Urban Surface Transportation	5,500,000	6,220,243
Air Transportation	600,000	245,796
Highway Rehabilitation Program	10,000,000	9,017,292
Subtotal	$111,340,000	$109,843,978
Total	$231,525,800	$224,076,485

* The effect of virements is not reflected in these amounts.

Expenditure Distribution



Accumulated Expenditures to Date



Accumulated Expenditure to Date

Fiscal Year	Current Year	To Date
1905-06	$ 49,546	$ 49,546
1906-07	484,177	533,723
1907-08	1,041,383	1,575,106
1908-09	1,443,335	3,018,441
1909-10	591,957	3,610,398
1910-11	610,920	4,221,318
1911-12	614,356	4,835,674
1912-13	2,525,188	7,360,862
1913-14	1,970,135	9,330,997
1914-15	2,370,439	11,701,436
1915-16	831,594	12,533,030
1916-17	536,594	13,069,624
1917-18	815,438	13,885,062
1918-19	616,472	14,501,534
1919-20	1,306,370	15,807,904
1920-21	1,804,973	17,612,877
1921-22	2,495,925	20,108,802
1922-23	2,201,358	22,310,160
1923-24	2,037,295	24,347,455
1924-25	2,229,408	26,576,863
1925-26	2,123,173	28,700,036
1926-27	2,660,195	31,360,231
1927-28	2,488,961	33,849,192
1928-29	4,228,261	38,077,453
1929-30	6,664,400	44,741,853
1930-31	10,703,359	55,445,212
1931-32	8,149,746	63,594,958
1932-33	905,374	64,500,332
1933-34	862,029	65,362,361
1934-35	1,661,983	67,024,344
1935-36	1,620,142	68,644,486
1936-37	2,595,381	71,239,867
1937-38	2,823,356	74,063,223
1938-39	3,509,280	77,572,503
1939-40	3,399,603	80,972,106
1940-41	1,706,382	82,678,488
1941-42	1,874,917	84,553,405
1942-43	2,126,374	86,679,779
1943-44	2,918,157	89,597,936
1944-45	3,387,320	92,985,256
1945-46	3,908,367	96,893,623
1946-47	$ 6,312,801	$ 103,206,424
1947-48	8,840,535	112,046,959
1948-49	8,853,999	120,900,958
1949-50	8,767,610	129,668,568
1950-51	10,118,744	139,787,312
1951-52	12,823,535	152,610,847
1952-53	18,919,646	171,530,493
1953-54	19,135,070	190,665,563
1954-55	20,395,779	211,061,342
1955-56	20,127,262	231,188,604
1956-57	24,140,190	255,328,794
1957-58	24,491,369	279,820,163
1958-59	23,697,574	303,517,737
1959-60	23,104,119	326,621,856
1960-61	25,237,066	351,858,922
1961-62	21,591,307	373,450,229
1962-63	22,094,828	395,545,221
1963-64	24,167,674	419,712,731
1964-65	27,152,511	446,865,242
1965-66	40,679,979	487,545,221
1966-67	54,387,704	541,932,925
1967-68	60,227,543	602,160,468
1968-69	60,110,923	662,271,391
1969-70	58,560,829	720,832,220
1970-71	68,081,718	788,913,938
1971-72	66,933,052	855,846,990
1972-73	63,362,093	919,209,083
1973-74	69,456,878	988,665,961
1974-75	96,760,356	1,085,426,317
1975-76	110,162,524	1,195,588,841
1976-77	123,321,325	1,318,910,166
1977-78	132,425,146	1,451,335,312
1978-79	160,610,850	1,611,946,162
1979-80	158,107,523	1,770,053,685
1980-81	168,287,313	1,938,340,998
1981-82	191,474,090	2,129,815,088
1982-83	192,829,361	2,322,644,449
1983-84	215,968,431	2,538,612,880
1984-85	211,979,173	2,753,592,053
1985-86	215,695,526	2,969,287,579
1986-87	219,921,430	3,189,209,009
1987-88	217,227,529	3,406,436,538
1988-89	224,076,485	3,630,513,023